

APPLICATION OF THE DETERMINED INTEGRAL IN THE FORMATION OF THE PROFESSIONAL COMPETENCES OF THE HIGHER AND PRE-HIGHER EDUCATION STUDENTS

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Modern requirements for mathematical training of applicants for higher education significantly increase the role of forming students' ability to independently acquire knowledge, as well as the application of acquired knowledge to solve problems of professional orientation, which, in turn, requires the teacher to search and develop new practical materials aimed at solving professionally oriented problems for each specialty. The issue of developing in students different areas of general, mathematical and professional competencies by means of mathematics is relevant, which, in turn, demonstrates its practical significance.

The main task of the teacher is to provide for students' mastering not only the theoretical material from different sections of mathematics, but also understanding why higher mathematics is studied and how the acquired knowledge is applied in practice. Therefore, the motivation to learn, the practical significance of the acquired knowledge become especially important. It is the applied orientation that contributes to the formation of the scientific worldview and testifies to the role of mathematics in modern production, economics, and science. The issues of application of the mathematical apparatus in the system of pre-higher and higher education to the solution of applied problems are relevant, which, in turn, demonstrates their practical application.

Modern mathematics is used in the study of various branches of science, enterprise, spheres of life, in various fields of knowledge through the construction and analysis of a model of the phenomenon being studied. Mathematical models of a real process or object can be presented in the form of formulas, equations, graphs, etc. In practice, differential equations are widely used to describe transients.

The study of various phenomena and processes, the solution of a wide range of problems are provided by the description of differential equations.

The article considers several problems of Physics, Chemistry, Biology and Economics that lead to differential equations.

The applied direction of solving problems by students of different specialties focused on future professional activity is an effective means of increasing learning motivation, an effective means of forming mathematical and professional competencies.

Teachers face the task of finding the content of education, teaching methods focused on different areas of specialization of college graduates. The research work of teachers and students significantly increases interest in the study of mathematics, confirms the importance of the subject in professional activities, forms both general and mathematical, professional competencies of the applicant for higher education, the future professional junior bachelor. Urgent and necessary, in our opinion, is the development of methodological and didactic materials to strengthen the applied orientation of the study of higher mathematics according to the professional interests of applicants for higher education. The obtained results open prospects for further research in the following areas: the development of methods for the formation of skills to solve applied problems by students of different specialties, strengthening the integration links between fundamental and professional-oriented disciplines.

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