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# Methodological teaching system of mathematical foundations of formal languages as a means of fundamentalization of education

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## Abstract

© 2017 Authors. The purpose of the study is to develop content and identify appropriate methods, forms and means of studying formal languages that take into account the specific character of professional development of the future specialist. The methodological basis of the study is the system approach and the methodology for selecting the content of education, which allows to generalize and systematize the process of constructing the content of teaching formal languages, and to improve the content of training to specific formal languages. The article suggests a system for studying mathematical foundations of formal languages as a system-forming element in the training of specialists in the field of computer science, programming, and IT-technologies. It gives reasons for the inclusion of elements of the theory of formal languages in the learning process, defines the structure and content of learning tasks and objectives, develops the system of end-to-end concepts and the logical structure of the course program, suggests the order of presenting the training material, the system of training assignments for a laboratory course on a computer. The developed system allows graduates to get the opportunity to develop a high-level understanding of systems in general, which contributes to a common understanding of the structure of computer systems, and the processes of their creation and analysis.

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## Keywords

Computer science and programming, Content of education, Formal languages, Fundamentalization, Mathematical foundations

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