

Summary

“Course Project in Theory of Mechanisms and Machinery” for students of all forms of education

Credit module «Course Project in Theory of Mechanisms and Machinery» is part of a cycle professional and practical preparation in the direction of preparation Mechanical Engineering speciality Equipment of Pharmaceutical and Biotechnological Productions for students 3 course (5 semester).

The discipline of the department realized Department of Bioengineering and Biotechnies Faculty of Biotechnology and Biotechnies NTYY «KPI».

Course project on the theory of mechanisms and machines is the first independent work of students on the design and research of complex mechanisms, which are integral parts of transport and special machines and process equipment for their maintenance and repair. Course project includes the task of planning and research the most common lever, cam and gear mechanisms and provides for consolidation, deepening and generalization of theoretical knowledge acquired in the study course "Theory of mechanisms and machines". Course project is carried out according to the individual objectives, which gets students from course design manager. course project (CP) on the theory of Mechanisms and Machines (TMM) consists of explanatory notes (p 30-50. al. text) and 4 sheets of A1 size drawing of the section "kinematic analysis and synthesis of mechanisms", "Synthesis and analysis of cam mechanism", "Synthesis and analysis gear mechanism", "Strength calculation lever mechanism", "Defining moment of inertia of the flywheel. "

Implementation of the course project requires solution of a set of tasks synthesis, kinematic and dynamic analysis lever mechanism and dynamic synthesis cam and geometric synthesis of gear mechanism. In most cases these problems are interrelated: the accuracy of solving the next problem is largely dependent on the source data that are the result of solving previous problems. And because the course project should be carried out in sequence. Before you start the design phase of a course project should clearly explain the statement of the problem to be solved, then, using educational literature and lecture notes on the theory of mechanisms and machines, to explore methods of solving acquainted with examples of solutions bonding such problems and only then begin the implementation of this phase. In most cases, you can use graphic-analytical method of solving problems. And because the estimated and graphic part of the project should be done in parallel. Particular attention should apply to determine the scale of the drawing, because of their loyalty depends calculation result of solving a particular problem.

Developer summary Mel'nyck Viktorija Mykolaivn, Professor, head of the Department of Bioengineering and Biotechnies