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| Discipline „System programming”, code: 33 |
| Annotation:  In this discipline the system administration and programming in multi-user systems are considered. Knowledge and principles are extended of development, functioning and application of modern multi-user and multi-tasking operating systems. The methods for users’ authentication and security of the system, user applications and data are emphasized. The details are considered of the command line interpreters, file systems, synchronization and communication of processes and the input-output system. Base concepts are considered of the multiprocessor and distributed systems as well as the main functions of the operating system kernel for network applications development.  The discipline is based on the previous disciplines: "Operating systems", "Algorithms and Data Structures", "Computer networks", etc. It provides the basis for "Distributed programming", "Web Applications Development", "Networks Administration" and the graduation work. |
| Main issues of the syllabus content:   * Main concepts of system programming * File systems * Input-output system and buffering * Processes * Signals * Named and unnamed pipes * Shared memory * Messages queues * Semaphores |