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| Discipline „programming systems”, code: 22 |
| Annotation: The course introduces students to the environment, technology and technology for application programming in the WINDOWS environment. The discipline examines:  - basic programming software under WINDOWS (message processing, menu operations, dialog and graphic elements, etc.), and  - tooling and programming tools for creating complex applications (DLL, COM, MFC, ATL, ActiveX and ODBC interface).  The course provides all special subjects from the curriculum of the specialty, using the knowledge of system programming in high-level languages ​​(C, C ++) and forming a user interface in the Windows graphical operating environment: "Computer graphics", "Databases", "Operating Systems", "Technology of Programming", "Programming Technologies on the Internet" and part of the optional courses and the diploma project in creating Windows applications and the Internet. |
| Main issues of the syllabus content:   * Organization of program components in WINDOWS * WINDOWS Window Object Model, Event Programming, Message Exchange * Basic WINDOWS concepts, resolving resources, dynamic libraries, program component interaction, RAM management * Create custom dialog, resource editor, dialog elements * Manage user dialogs, menus, dialog boxes, dialogs * Device Context, Graphics, Keyboard and Mouse Control * Principle of operation of complex controls: tree control, tabular control * Creating and accessing dynamic libraries (DLLs) * COM-modules, principle of operation, exemplary COM modules * Libraries and modules for user dialogue management MFC, ATL, ActiveX * Access to databases, ODBC interface, database management functions |