

SPECIALIZATION

SOFTWARE DEVELOPMENT

A SPECIALIZATION SOFTWARE DEVELOPMENT INCLUDES:

- Introduction to algorithm theory and data structure.
- Traditional programming using C language.
- Object-oriented programming using C++ language.
- Using class library of standard templates STL.
- Development of Windows application, working with management elements, arranging of user interfaces.
- Data base theory: structured query language SQL, design of data bases, optimization of data bases.
- Data base management system: principles of DBMS programming.
- Microsoft SQL Server, My SQL.
- Programming and administering of Microsoft SQL Server 2014.
- DBMS programming Oracle.
- System programming (processes and threads, synchronization primitives, inter-process communication).
- Network programming (sockets, synchronous and asynchronous data exchange mechanisms, protocols).
- Web-page development using markup language HTML5 together with cascade charts of CSS3 style.
- JavaScript language.
- Extensible markup language for Web-page development – XML.
- Creation of web-applications exercised on the server side using programming language PHP and AJAX technology.
- Application development using Client-Server technology.
- Application creation for Microsoft.NET platform:
 - Task level language of .NET solutions – C#.
 - Base Class Library (BCL).
 - Application development using Windows Forms.
 - Work with data sources by means of ADO.NET.
 - Application development using WPF.
 - Development of service-oriented applications using Windows Communication Foundation.
- Development of web-applications ASP.NET using C# language together with DBMS MS SQL Server, data sources XML and AJAX technology.

- Creation of cloud solutions using Windows Azure.
- Programming using Java technology.
- Development of mobile applications for Android OS.
- Games development.
- Design patterns.
- Software testing (QA).
- Object-oriented design. UML language.
- Program Projects management.
- IT essentials. Hardware and software for PC – certified course Cisco Networking Academy.
- Hardware of working stations and notebooks.

Certified Courses Microsoft It Academy:

- 6292. Windows 7 installation and configuration.
- 2778. Using of structured query language in Microsoft SQL Server 2008.
- 6369. Implementation and support of Microsoft SQL Server 2008.
- 6370. Microsoft SQL Server 2008 R2 data base programming.
- 10151. Installation and configuration of Microsoft SQL Server 2008.
- 10152. Creation and management of Microsoft SQL Server 2008 data bases.
- 10153. Planning, creation and optimization of indexes in Microsoft SQL Server 2008.
- 10154. Backup and data base recovery in Microsoft SQL Server 2008.
- 10155. Security management in Microsoft SQL Server 2008.
- 10156. Task management automatization in Microsoft SQL Server 2008.
- 10157. Control and management of Microsoft SQL Server 2008 resources.

STUDENTS SUCCESSFULLY FINISHED
THEIR STUDIES GET THE FOLLOWING
CERTIFICATES

Cisco IT Essentials. PC Hardware and Software

Microsoft 2778 Querying and Modifying Data in
Microsoft SQL Server 2008 with Transact-SQL

Microsoft 6369 Implementing and Maintaining Microsoft
SQL Server 2008

Microsoft 6370 Microsoft SQL Server 2008 R2 Database
Development

Microsoft 10151 Installing and Configuring Microsoft
SQL Server 2008

Microsoft 10152 Creating and Managing Databases in
Microsoft SQL Server 2008

Microsoft 10153 Planning, Creating, and Optimizing
Indexes in Microsoft SQL Server 2008

Microsoft 10154 Backing Up and Restoring Databases in
Microsoft SQL Server 2008

Microsoft 10155 Managing Security in Microsoft SQL
Server 2008

Microsoft 10156 Automating Administrative Tasks in
Microsoft SQL Server 2008

Microsoft 10157 Monitoring and Controlling Resources
in Microsoft SQL Server 2008

AFTER FINISHING THE COURSE STUDENTS WILL BE
READY TO TAKE CERTIFIED EXAMS ON THE
FOLLOWING **CERTIFIED PROGRAMS**

CompTIA A+: 220-801, 220-802

Oracle Certified Associate, Java SE 7 Programmer: 1Z0-803

Microsoft MCTS: 70-461, 70-480, 70-486, 70-483, 70-513, 70-516

The demand for the specialists in the field of software development and testing is constantly increasing. Banks, internet-providers, small, medium and big business companies, as well as state organizations which activity includes software development and testing, are interested to employ our graduates. You can find a job of programmer, software testing specialist or quality control engineer, technical writer, web-programmer or data base developer and administrator.

AFTER FINISHING THE COURSE
YOU WILL BE ABLE:

- ✓ To create Windows-applications using client-server technologies, graphics, data bases and multimedia;
- ✓ To make proper and fast calculations of solution algorithms for relevant tasks as well as the cost of its implementation;
- ✓ To develop and manage data bases of any complexity and size;
- ✓ To develop Internet-applications containing data base information, that respond to users' actions;
- ✓ To automatize data base handling (working with one or several data bases at the same time) depending of the task and customer's requirements;
- ✓ To participate in games development;
- ✓ To modify Windows-programs for the relevant tasks;
- ✓ To develop network applications;
- ✓ To develop mobile device applications for Android;
- ✓ To create utilities for user's everyday tasks;
- ✓ To create web-applications and dynamic web-sites on the basis of .NET platform;
- ✓ To provide application security using encryption, authentication and secure connection algorithms;
- ✓ To test software using modern technologies;
- ✓ To develop program projects regardless of final implementation language;
- ✓ To manage all the minute aspects of program projects;
- ✓ To document created applications;
- ✓ To create cloud solutions using the possibilities of Windows Azure;
- ✓ To know how effectively work in team, and how to manage team of developers;
- ✓ To use project patterns in everyday activity;
- ✓ To program cross-platform solutions.