

CROZ COURSE CATALOGUE

Aware of importance of fast knowledge acquisition and constant changes in the IT world, we pay special attention to education. During the years of working on development projects, we came to realize that precisely the ability of fast new knowledge acquisition and continuous education is one of the most important factors in the success of an IT company. In order to help our clients elevate their level of knowledge and make the progress of technological changes easier to keep up with, we initiated a series of our own education services - from in advance prepared catalogue courses, thorough customized workshops to, finally, consulting on real-life projects. We are particularly proud of our consultants and trainers constantly being involved in development projects where they continuously gain new knowledge and experiences which they then can pass onto others through courses and consultations.

As an IBM Authorized Independent Training Provider for Rational brand, we can provide all of the standard courses in the IBM Rational courses offering. The courses are held by our consultants and trainers thus far having more than 30 certificates from all fields of Rational. Alongside these standard courses, in our catalogue we have a series of courses concerning technologies and methodologies, and which we ourselves produced. The most commonly held are specialist Java courses prepared by our experts.

The courses can be held at yours or our location, respectively. The courses will be held upon request and according to arrangement with each individual client (date and location). The course contents can be specially customized to client's requests.

Let us note how on our long list of clients using our educational services, there are numerous references of clients from the region as well. Great dedication of our trainers and consultants is best seen through the high grades achieved at the end of the course.

1. CROZ COURSES

	Course	Code	Duration
Basic Development Education			
1	<p>Object oriented programming and Java programming language - part 1</p> <ul style="list-style-type: none"> • Introduction to basic object oriented programming principles • Write, compile, and run a simple Java program • Write, compile, and run a simple Java program using development tool Eclipse • Basic elements of Java programming language • Operators and associations • Access modifiers and other modifiers • Type conversion (casting) • Flow control (conditions and loops) • Exceptions • Classes and objects • Implementation hiding • Polymorphism, interfaces and abstract classes • Inner classes • Multithreading • java.lang.* package details • Object collections • Recommendations for working in Eclipse 	CROZJava1	5
2	<p>Object oriented programming and Java programming language - part 2</p> <p>GUI application development in Java – Basics:</p> <ul style="list-style-type: none"> • GUI components • Layout Managers • Events • Java I/O (input/output) subsystem 	CROZJava2	3
3	<p>Object J2EE, SERVLET and JSP programming</p> <p>1. Introduction</p> <ul style="list-style-type: none"> • Introduction to Java Servlet technology • Introduction to Java Server Pages technology • Basic terms and insight into web applications and HTTP protocol 	CROZJava3	10

	<p>2. Java Servlet Technology</p> <ul style="list-style-type: none"> • Servlet Operation Model • Structure of a web application • Servlet Container Model • Error management • Session management • Introduction to secure web application development • Multithreaded Servlet development <p>3. Java Server Pages (JSP) Technology</p> <ul style="list-style-type: none"> • Introduction to JSP Model • Advanced JSP Model concepts • Reusable web components • Usage of JavaBeans technology • Creating custom tags • Custom tag library development <p>4. Design patterns and Filters</p> <ul style="list-style-type: none"> • Introducing several basic design patterns crucial to web application development • Using filters <p>5. Additional subjects</p> <ul style="list-style-type: none"> • Installation of Apache Tomcat v5.x Servlet Container • Brief introduction to XML (for purposes of better understanding configuration files) 		
4	<p>Rich Internet Application Development in Adobe Flex</p> <p>Adobe Flex is a platform for developing so-called Rich Internet Applications. This course deals with important issues when embarking on application development with Flex. It starts with the basics of ActionScript and MXML and continues with a more detailed discussion of how to work with visual components and communicate with the application's server side. Second part is about working with business intelligence module and moreover about techniques of drawing those fancy graphs. Last part of the course deals with some of the more important Flex extensions in the form of external class libraries and advanced topics such as organization of unit-tests and Flex JSP taglib.</p>	CROZFlex	5
Advanced Development Education			
5	<p>Advanced concepts of Java programming</p> <ul style="list-style-type: none"> • Advanced JDBC • Declarative transaction management • JMS • O/R mapping • Scheduling 	CROZJava4	5

	<ul style="list-style-type: none"> • Unit testing • Security • Logging and Auditing 		
6	<p>Integral approach to Software Development</p> <p>Software development process is a far wider concept than mere programming. Diverse and apparently unconnected disciplines and activities arranged and used in the right way, facilitate the development process, assist in planning and in the end affect the successful outcome of the project itself.</p> <p>The workshop will provide the explanations for the concepts such as source code repository, issue tracker, snapshot and integration build, developmental, staging, test and production environment, build and test automation, as well as for the connections and interactions between them.</p>	CROZBRM	2,5
7	<p>Spring Framework course</p> <p>Spring Framework is a library set which considerably eases application development in the Java programming language, of standard or enterprise applications alike. Spring Framework has introduced a couple of novelties into the Java and J2EE world, such as Inversion of Control (IoC) and Dependency Injection (DI) principles, Aspect Oriented Programming (AOP) and much more. This course gives a complete overview of Spring Framework, from its basic to more advanced features.</p> <p>Basic Java and J2EE technology knowledge required.</p>	CROZSF	5
8	<p>Web services - concepts, development, implementation</p> <p>The purpose of this course is for the participants to get acquainted with the concepts of Web Services as well as with how to implement and use them. The course alongside the theory offers plenty of practical examples and exercises.</p> <p>Content:</p> <ul style="list-style-type: none"> • Introduction to Web Services (service and web service as a term, examples, types and usage of web services) • Set of basic standards for realization of W3C Web Services (XML, SOAP, WSDL, UDDI) • Transport protocols for Web Services (HTTP, JMS) • Creating Web Services (development principles, examples and exercises) • Creating clients for Web Services (client development 	CROZWS	3

	<p>principles, examples and exercises)</p> <ul style="list-style-type: none"> • Deployment of Web Services • "Quality of service" Web Service standards (security, transactions, basic profile) • The role of Web Services in the SOA world (SOA, ESB) 		
Project management			
9	<p>Basic project management education</p> <p>The purpose of this course is to make project managers competent in efficient communication management, budget planning and other important project-related details. Besides theoretical knowledge of project structure, documentation and so on, the course covers practical segments of dealing with the conflicts as well as meeting management.</p> <p>There are two options for course duration, dependent to the number of exercises and examples performed (according to client needs).</p>	CROZPM1	3 or 5
10	<p>Short overview of project management methodology, skills and execution</p> <p>The course is a short version of the course CROZPM1 intended for project team members. Special attention is given to project documentation and planning.</p>	CROZPM2	2,5
Business Modeling			
11	<p>Introduction to Business Modeling</p> <p>The course serves as an introduction to the business modeling process and presents short overviews of the following:</p> <ol style="list-style-type: none"> 1. Business process definition 2. Business processes and organization structure 3. Methodologies and tools for change implementation 4. BPM: project approach 5. Process modeling 	CROZBM	2
12	<p>Essentials of WebSphere Business Modeler</p> <p>The course deals with business process modeling and presents short overviews of the following:</p> <ul style="list-style-type: none"> • SOA and business process modeling • Demonstration of WebSphere Business Modeler tool • WebSphere Business Modeler – typical work assignments 	CROZWBM	3

Administration			
13	<p>IBM WebSphere Application Server Administration</p> <p>IBM Websphere Application Server V6 course is intended for administrators. Upon completing the course, participants will be able to install, configure and service IBM application server on their own. At the beginning of the course they will learn about the application server architecture and WebSphere products. During the course participants will install WebSphere Application Server and IBM HTTP Server by themselves. They will learn how to define the data source, configure and install applications using graphical interface or command line (wsadmin) as well as how to fix problems in WAS environment.</p>	CROZWAS	2
Tivoli Courses			
14	<p>Introduction to IBM Tivoli Monitoring v.6.x</p> <ul style="list-style-type: none"> • Purpose and functions of monitoring tools • Learning about ITM v 6.x features • Monitoring system architecture • TEP GUI Usage • User administration, view configuration 	CROZT1	2
15	<p>Advanced IBM Tivoli Monitoring course</p> <ul style="list-style-type: none"> • Installation of ITM v 6.x on the MS Windows platform • Configuration of monitoring agents • Configuration of monitoring providers • Configuration of Tivoli Data Warehouse • Creating monitoring situations and policy • Creating custom monitors 	CROZT2	3
16	<p>Introduction to IBM Tivoli Composite Application Manager for RTT v.6.1 – workshop</p> <ul style="list-style-type: none"> • Purpose and functions of ITCAM for RTT tool • User interface • Demonstration of monitoring components • Creation of robot scripts • Integration with ITM 6 	CROZT3	2
17	<p>Introduction to IBM Tivoli Composite Application Manager for RT v.6.2 - workshop</p> <ul style="list-style-type: none"> • Purpose and functions of ITCAM for RT tool • User interface • Monitoring components • Robot scripts creation 	CROZT4	2

18	<p>Tivoli Application Dependency Discovery Manager – workshop</p> <ul style="list-style-type: none"> • Purpose and functions of CMDB • Tivoli CCMDB architecture • Functions of TADDM • Sensor mode • Configuration in different environments • Reports and integration 	CROZT5	2
19	<p>Introduction to IBM Tivoli Composite Application Manager for WebSphere – workshop</p> <ul style="list-style-type: none"> • Purpose and functions of ITCAM for WAS tool • Monitoring solution architecture • User interface and data displays • Configuration • Report generation • Integration with other monitoring tools 	CROZT6	3
Service Oriented Architecture			
20	<p>Sustainable SOA</p> <p>The objective of this course is to demystify this growingly popular architectural concept by presentation and analysis of key principles, architecture and methodology employed during implementation of SOA solutions in an enterprise environment. Through interactive presentations, the course attendees will learn about basic principles of service orientation, SOA reference architecture layer description, process automation in SOA environments, SOA methodological support and SOA Governance. The course will also provide explanations on how Complex Event Processing and Event Driven Architecture relate to service oriented architecture.</p>	CROZSOA	2
Security			
21	<p>Threats and best ways of protecting confidential data on your personal electronic devices</p> <p>Do you own any electronic documents or information on secrecy of which your reputation, workplace or the future of your company depends?</p> <p>Are you in finance, sales, marketing or management and your portable computer is loaded with confidential agreements, tables with financial data while the information you store on network resources or send over the Internet is extremely sensitive? Confidential data you keep on your potable computers, mobile phones, USB disks or similar devices, and the data you send via the Internet or intranet</p>	CROZS1	1

	<p>are exposed to a variety of threats.</p> <p>Get to know what the threats are and learn in the easy way how you, yourself, can protect your data and therewith your company and your job as well.</p>		
Configuration Management			
22	<p>Use of Rational Team Concert</p> <p>The purpose of this two-day course is to enable programmers through practical examples to be self-sufficient in dealing with all of the tool's functions.</p> <p>Course agenda:</p> <ul style="list-style-type: none"> • introduction to RTC architecture • development process with RTC • working with work items • configuration management with RTC • integrated build • project planning with RTC • project progress tracking with RTC • reporting 	CROZRTC	2
Soft Skills			
23	<p>Presentation Skills and Public Performance Training</p> <p>Communication with groups of people and presentation skills make one of the elementary components of business literacy and business success. Good presentation of an idea will make that idea appealing. Bad presentation of an idea, on the other hand, can permanently halt its realization. Education without a high-quality trainer, who is not capable of knowledge transfer in a structured and effective manner, can in no way be of quality.</p> <p>How to present a product so as to be accepted by the target group?</p> <p>Training attendees will learn both in theory and practice how to:</p> <ul style="list-style-type: none"> • get over your fear of public performance • make a desired impression in the first 90 seconds • communicate with the audience • categorize presentation's contents in a quality manner • adapt your presentation to the needs of the audience • answer unpleasant questions • effectively use PowerPoint • control all segments of non-verbal communication 	CROZPV	2

2. IBM RATIONAL COURSES

For years now, the members of CROZ's Rational team have been intensely involved in dealings connected with education, implementation and usage of Rational tools. In January 2006, CROZ became a member of IBM Rational Value Advantage Plus Program and Authorized Independent Training Provider (AITP).

IBM **Rational** software courses in the organization of CROZ are prepared according to IBM materials and held by CROZ's certified Rational experts.

	Course	Code	Duration
Configuration Management			
1	Essentials of Rational ClearCase for Windows Participants will learn how to perform their daily tasks using ClearCase. The purpose of this course is to introduce concepts and skills necessary for effective change management of code in its development environment.	SCM270	2
2	Essentials of IBM Rational ClearCase for Unix	SCM271	2
3	Essentials of Rational ClearCase Basics for Windows This course is a short version of the course SCM270. Participants will learn basics of file and directory versioning, workspace management and so on.	SCM272	1
4	Essentials of Configuration Management with IBM Rational ClearCase	SCM370	1
5	Essentials of IBM Rational ClearCase UCM for Windows The course introduces concepts of Unified Change Management, best practices that integrate artifact and activity management. Participants will learn how to use ClearCase and ClearQuest in their everyday activities such as control files checkout and check-in, work collaboration with other team members, work offline and so on.	SCM275	1
6	Essentials of IBM Rational ClearCase UCM for Unix	SCM276	1
7	Essentials of Configuration Management with IBM Rational ClearCase UCM Unified Change Management _UCM is an approach to change management ranging from requirements to production versions of the software. UCM defines a consistent change management process all the way through the development lifecycle. Participants will learn how to use the ClearCase in order to implement the UCM approach. Project managers will learn how to create and configure a new project as well as set up development and policies for creating executable code versions that will in turn be automatically controlled by ClearCase. Integrators will learn to use the ClearCase for code integration and configuration of the final product.	SCM375	2
8	Mastering Rational ClearCase Multisite Administration	SCM485	2

9	Mastering Rational ClearCase Administration for Windows Experienced Rational ClearCase users and administrators can further their knowledge by attending this course. During this course they will learn how to make deployment and maintenance of Clear Case implementation less difficult, starting with the installation itself to configuration and continual administration.	SCM470	2
10	Mastering IBM Rational ClearCase Administration for Unix	SCM471	2
11	Essentials of IBM Rational ClearQuest The course will provide an introduction on how to use ClearQuest for defect tracking and change requests. Participants will learn basic concepts of request tracking using ClearQuest and how the product can speed up this process.	SCM290	0,5
12	Mastering Rational ClearQuest Administration The course provides training for ClearQuest administration and adaptation. It discusses planning and implementation of the defect tracking and change request process as well as product adaptation in order to ease the process in mention. The course is intended for ClearQuest administrators.	SCM490	3
13	Mastering Rational ClearQuest Multisite Administration	SCM495	2
14	Essentials of IBM Rational Build Forge, v7.0.1	RS543	2
Process and Project Management			
15	Essentials of the Rational Unified Process The course deals with the Rational Unified Process (RUP), a knowledge base which includes software engineering best practices proven on many successful development projects. The course discusses best practices, iterative development, knowledge base organization and content. Participants will hear about all the disciplines and roles in a development process. The course will emphasize the main principles of iterative development, phases, iterations and their goals. Special emphasis, as the RUP itself stresses, will be on risk and change management. Group work will be based on practice examples and on mutually chosen school examples corresponding to the participants' daily issues. Participants will gain enough knowledge about the RUP development process to obtain efficient competence about the development phases as well as coordinate development activities.	PRJ270	2
16	Essentials of Tailoring Methods with IBM Rational Method Composer Participants will learn how to create, publish and export methods using IBM Rational Method Composer V7.0. The course covers tool usage, tool environment, usage of Rational Unified Process standard libraries, explains the concepts and terminology connected with the solution, activity planning, method creation and so on.	PRJ350	1
17	Mastering the Management of Iterative Development The course focuses on the need to switch from the traditional to the iterative approach when it comes to project management. During the course, we will discuss the most common situations in iterative development with which development teams and project managers will meet. The course will look at the procedures a	PRJ480	2

	<p>project manager may take in order to advance the iterative development process.</p> <p>Participants will gain 14 points for PMP certification upon completion of the course.</p>		
Requirements Management			
18	<p>Essentials of Rational RequisitePro</p> <p>The course covers the basic functionalities of this requirements creation and management product. The course, that is to say one-day workshop, includes a lot of practical work and is based on requirements management best practices. Participants will learn how to manage the scope of the project using the tool, manage requirements attributes and use traceability links as well as how to manage requirements changes.</p>	REQ370	1
19	<p>Business Modeling with the UML</p> <p>Participants will learn about the business process modeling approach using the language used by the development teams for system modeling. Using the same notation in both the business and development domain, makes the communication between business analysts and software team much easier which in turn makes business requirement gathering better which consequently gives us a higher quality product in the end. The course includes introduction to UML notation in the domain of business modeling and through a series of exercises introduces the main concepts of this approach.</p>	RR621	1
20	<p>Mastering Requirements Management with Use Cases</p> <p>The course deals with the issues of requirements management using use case modeling. The course focuses on defining user requirements and on change management of project requirements, followed by problem analysis, defining of the vision and finally on defining requirements with use cases. The course also touches upon the fields of establishing attributes over requirements, requirements traceability and project scope management. Participants will practice various problem analysis methods as well as different styles when describing requirements.</p>	REQ480	3
Software Quality			
21	<p>Principles of Software TESTING FOR TESTERS</p> <p>The course provides an overview of the main practices when it comes to efficient software testing. Participants will master the material on examples through practice. Key course subjects include defining test team Mission, study of different test types and techniques, effective defect analysis and so on.</p>	TST170	2
22	<p>Essentials of IBM Rational Performance Tester</p>	TST370	2
23	<p>Essentials of Test Management with Rational TestManager</p>	TST275	1
24	<p>Essentials of Test Management with IBM Rational ClearQuest</p>	TST290	1
25	<p>Essentials of Functional Testing with Rational Robot</p>	TST277	2
26	<p>Essentials of IBM Rational Functional Tester, Java Scripting</p> <p>This introductory course is designed to familiarize members of the test team with the concepts of test automation with Rational</p>	RT541	2

	Functional Tester using Java scripting language. The course is based on examples so participants can directly gain some experience in working with the product. The course is focused on product usage but also includes Java programming basics in order to be able to create test scripts.		
27	Essentials of Manual Testing with IBM Rational Manual Tester	RT421	1
28	Essentials of Functional Testing with IBM Rational Tester for SOA Quality, V7.0.1	RT550	1
Visual Modeling and Development			
29	Principles of Architecting Software Systems The course covers fundamental architectural principles and gives a clear overview of basic concepts, advantages and development steps necessary for the success of architecturally-centered software development.	RD901VN	3
30	Essentials of Visual Modeling with UML 2.0 The course covers the basics of OO development using UML, introduces abstraction concepts, polymorphisms and encapsulation. Participants will learn what are classes and objects, how to make use of them in software development as well as how to use some basic UML elements.	DEV275	1
31	Mastering Object-Oriented Analysis and Design with UML 2.0 The course presents the concepts and techniques necessary for efficient use of requirements modeled in use cases and which in effect should carry the development of robust design models. In this intensive course/workshop, participants will learn how to use UML notation in basic OOAD concepts, including architecture, objects, classes, components, subsystems, stereotypes, relations and various UML diagrams. Participants will use UML throughout the project's lifecycle and will use them to express their analytical and design decisions. This way UML will be discussed in the iterative development spirit governed by use cases and architecture.	DEV475	4
32	Essentials of Rational Software Architect v7.0 During this workshop, architects and designers will learn the essentials of UML diagram usage in RSA, how to make transformations out of these models, how to analyze application's architectural structure and so on.	DEV396	2
33	Essentials of Rational Application Developer for WebSphere Software On this two-day workshop, participants will acquire fundamental skills which are necessary to be able to develop using IRAD, they will learn how to use different functions of the product in the domain of UML, code analysis, code revision and so on.	DEV395	2
34	Essentials of IBM Rational Software Architect Extensibility The course is intended for software architects, designers and development team leaders who want to acquire some knowledge about different extension features of IBM Rational Software Architect product.	DEV398	1

	<p>Through information transfer about plug-in, pluglet, transformation and pattern concepts, participants will learn how to:</p> <ul style="list-style-type: none"> • Apply strategies of Model-Driven Development and Model-Driven Architecture paradigms • Develop and apply custom patterns • Develop and apply custom transformations • Use already made artifacts in a new development project • Expand the functionality of fundamental Eclipse environment through development of plug-in and pluglet components. 		
35	<p>Essentials of IBM Rational Software Modeler for Systems Development</p> <p>The course is intended for software engineers, architects and designers who use Rational Unified Process for Systems Engineering and Model-Driven Development or Model-Driven Architecture paradigm in their work. Learning about IBM Rational Modeling tools, participants will also learn how to:</p> <ul style="list-style-type: none"> • Describe basic functionalities of Rational Software Modeler tool • Use model templates and their building elements in order to increase productivity • Use and create different UML diagrams • Use the functionalities concerning team collaboration and hear about some of the best practices concerning team collaboration within Rational Software Modeler tool. 	DEV399	1
36	<p>Mastering EGL and IBM Rational Business Developer Extension v7.0</p>	RD742	4