Course Offerings

Software Development Best Practice Seminars

Performance Training

- Improve project management
- Improve development capabilities
- Improve leadership & management skills
- Complete projects on time and within budget
- Reduce IT costs by removing excess
- Increase ROI on IT spending
- Improve customer satisfaction
- Outperform your competition

Best Practices

In Software Development

PMI Registered Education Provider — Project Management Institute

Salt Lake City . Park City . Moab

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Phone: (801) 636-0043

RedRock RESEARCH
Software Development Best Practices

public seminars
on-site seminars
consulting

Course Offerings

VIEW OUR ONLINE COURSE SCHEDULE

http://www.RedRockResearch.com

PMI Registered Education Provider — Project Management Institute

Management Track

- Software Development Life-cycle (SDLC) Management (3 days - **18 PDU's**)
- Software Project Management (3 days - **18 PDU's**)
- Agile Development using Scrum (2 days - **12 PDU's**)
- Software Production Operations Support (1 day - **6 PDU's**)
- Software & Infrastructure Process Quality Management (1 day - **6 PDU's**)
- ITIL v3 Foundation Exam Test Prep (3 days)

Technical Track

- Software Requirements Management (3 days - **18 PDU's**)
- Software Estimation (3 days - **18 PDU's**)
- Migrating to MySQL (1 day)

Learn the best practices to deliver your fully-featured software projects on-time, within-budget, and at desired quality levels.

RedRock RESEARCH
Software Development Best Practices

Ask about our on-site seminars

We'll come to your location and provide training to your people in your environment. 25% discount applies to groups of four or more.

ITIL v3 Foundation Exam Prep Course

3 days

The Information Technology Infrastructure Library (ITIL) is an emerging framework for managing the technology service lifecycle. Our three day exam prep course guarantees attendees will pass the ITIL v3 Foundation certification test, or we will refund your money.

The course does not include the cost of the test and you must schedule a time with a local testing center to take the test, preferably the morning after our three day prep course.

What you'll learn in class

- Everything you'll need to pass the ITIL v3 Foundation exam!

The value of professional training...

It's common for an organization to send entry-level employees, new team members, or certification-bound associates for professional training. While this is marginally beneficial, it is really a form of damage-control, and not an investment in performance-tuning an organization.

High-performance organizations realize that sending their best employees for professional training produces exponential benefits within the organization because these talented employees already understand the fundamentals of their occupations and can retain more from the training process. Consequently, they are in a far better position to implement the new concepts inside the organization when they return from the training engagement.

This is not just our opinion, Gallup-poll studies support this conclusion and you can read about it in the book *Now, Discover Your Strengths*, by Marcus Buckingham and Donald O. Clifton.

Grow your teams through direction, empowerment, accountability and success. *Have them value excellence over heroics*.

Management Track

FOR SOFTWARE PROFESIONALS

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Project Management Institute
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Software Development Life Cycle (SDLC) Management

3 days - 18 PDU's

Drafted specifically for managers, this course covers best practices for managing your environment, maximizing your team's productivity, and producing high-quality software that is delivered on-time within-budget and at desired quality levels.

What you'll learn in class

- The history and predominant influencers of the software development industry
- The different software lifecycles and the best scenario to use each one
- How to manage the software development process effectively
- How to compose project documentation (Project Charter, High Level Analysis, Software Requirements Specification, System Design Description, etc.)
- The fundamentals of documenting project requirements
- How to manage the approval process effectively including dealing with approval noise
- How to communicate and work effectively with all stakeholders in a project
- How to manage stakeholders expectations effectively
- How to document and report on daily project progress
- How to manage multiple project requests from various sources
- How to manage teams of people effectively building credibility, trust, and buy-in
- Effective hiring and staffing strategies
- How to measure your teams Productivity Index and compare it with others in the industry
- How to work effectively with peers
- How to work effectively with product marketing teams
- Quality system fundamentals
- The 25 most dangerous security errors
- Large-scale architectures, load-balancing, and data-warehousing
- Practices that improve the success rate of off-shore development

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Class sizes are limited-register early!

For more details about a seminar, or to register for a seminar, visit: http//www.RedRockResearch.com

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Software Project Management

3 days - 18 PDU's

On any given day, for any given project, can you empirically articulate the current project's status? Keep your software projects on track with the latest industry techniques.

What you'll learn in class

- The history and predominant influencers of the software development industry
- Industry organizations you should know about
- Software industry project success rate trends
- Successful vs. unsuccessful project profiles
- How software projects are different than other projects
- Project vs. Product management
- Understanding customer value
- Identifying stakeholders and creating a stakeholder register
- Triple constraint management
- The nine project management knowledge areas
- Handling formal project requests vs. new idea requests
- Drafting a Project Request Document (PRD)
- Creating a Business Case Analysis (BCA)
- Six ways to evaluate the economic value of a software product
- The Project Initiation phase
- Drafting a Project Charter (PCH)
- Project Risk Management
- Creating a High Level Analysis (HLA)
- Creating a Risk Register
- The order of magnitude estimate, or project forecast
- Approving the Project Charter
- The Project Planning phase
- Creating a Project Plan (PLN)
- Creating scope, schedule, and cost baselines
- Creating a Work Breakdown Structure (WBS)
- Software project quality management
- Approving the Project Plan
- The Execute, Monitor and Control phases
- Rolling-wave planning
- Communicating with the project stakeholders
- Project Status updates with Gantt charts and burn-up charts
- Project release planning
- Project Release and Stabilization phases
- Project closeout
- End of project performance metrics
- Centralizing IT Governance, or Portfolio Management
- Centralizing Project Management into a Project Management Office (PMO)
- Developing your Enterprise Asset Library
- Recording and reporting project metrics
- Improving you next project with retrospectives

Agile Development using Scrum

2 days - 12 PDU's

Agile development continues to grow in popularity. A recent study shows that 30% of all software development organizations have adopted Agile Development methodologies to some extent. Learn how Agile can benefit your organization.

What you'll learn in class

- How Agile Development methodologies deliver business value to your customers faster
- The history of Agile Development
- The industry business case for Agile
- The Snowbird, UT conference
- The Agile Manifesto
- Principles behind the Agile Manifesto
- Agile Project Management Declaration of Interdependence
- How Agile compares to Plan-based models
- Myths about Agile Development
- Time-boxing: The Sprint
- Daily Standup Meetings: Scrum
- User Stories
- Test Driven Development (TDD)
- Behavior Driven Development (BDD)
- Automated Testing
- Continuous Deployment
- Continuous Integration
- The right way to do Pair Programming
- Feature Teams
- Variations of Agile: DSDM, Lean, ASD, FDD, Crystal, XP, XBreed, Scrum
- Scrum as the leader in Agile Development methodologies
- How to implement Scrum
- The roles: Scrum Master, Product Owner, Delivery Team
- The rituals: Sprint Planning Meeting, Daily Scrum, Sprint Demo, Sprint Retrospective
- The artifacts: Product Backlog, Sprint Backlog, Burnup Charts, Sprint Board
- Sprint 0: The first Sprint
- Software requirements with Agile Development
- Implementing Agile into a development environment
- Scaling Agile for the Enterprise

Software Production Operations Support

1 day - 6 PDU's

Is your production operations team playing ball, or just swinging a bat? Improve your groups performance by learning these strategies to minimize business risks, maximize system uptime, and manage your customers expectations.

What you'll learn in class

- Your organization as a service provider
- Service Level Agreements and the Service Package
- Formal service operations management: Service Level management , Capacity management, Availability management, Continuity management, Configuration management, Information Security management
- Incident vs. Problem management
- The fundamentals of process quality improvement
- Tools: checklists, standard operating procedures, SLAM Charts, and dashboards
- The Process Asset Library (PAL) and Configuration Management
- How to maximize system uptime for your high-availability services
- How to minimize impact of system failures on your enterprise
- How to manage your customers expectations successfully
- How to construct a low-risk execution plan for those one-off critical procedures

Software & Infrastructure Process Quality Management

1 day - 6 PDU's

Plagued with quality issues? In this course we compare ISO, CMMi, Six Sigma, ITIL, and COBIT. Which one is best for you? What can you start doing today?

What you'll learn in class

- Quality system essentials
- Proactive vs. reactive environments
- Quality system components
- Myths about quality
- Measuring the Cost of Quality
- Comparing the big 5 quality systems: ISO, CMMi, Six Sigma, ITIL, COBIT.
- System performance metrics for each level: company, department, service, project, team, and employee
- Measuring defects in software
- Quality improvement goals
- The Quality Cycle: PDCA, I.D.E.A.L, Kaizen
- Understanding System Theory
- Quality Management Tools: checklists, pareto charts, control charts, scatter charts, cause and effect diagrams
- The Three P's of a Quality Management System: Process, Proof, and Process-improvement
- Quality audits
- How to successfully establish a quality system within your organization

Technical Track

FOR SOFTWARE PROFESSIONALS

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Software Requirements Management

3 days - 18 PDU's

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According to software industry research, requirement skills are more critical to the overall success of a software project than any other manageable skill-set.

What you'll learn in class

- The history and predominant influencers of the software development industry
- Sources for requirements
- Common requirements errors, and how to avoid them
- Various ways to write requirements
- The Requirement Process: Elicitation, Analysis, Specification, and Validation
- How to develop a requirements baseline
- The three categories of software requirements
- Use Case diagramming using free UML tools
- How to construct data-flow diagrams
- Various ways to prioritize project requirements
- How to identify and qualify project risks
- How to create a Work Breakdown Structure (WBS)
- How a project progresses through various project documentation stages: Project Request Document (PRD), Business Case Analysis (BCA), High Level Analysis (HLA), Software Requirements Specification (SRS), Systems Design Description (SDD), and Concept of Operations (COO)
- How to create a High Level Analysis (HLA) document
- How to use a Software Requirements Specification (SRS) document
- How to build a product roadmap
- How to align project requirements with business goals
- Upstream and downstream traceability
- How to conduct proper requirements approvals
- How to manage approval noise
- How to manage scope creep via change control
- How to speed up the requirements process
- Learn how a requirements showcase can benefit your organization
- Interviewing techniques for in-house and off-site stakeholders and subject matter experts
- Four strategies to improve your requirements management performance going forward

RedRock RESEARCH
Software Development Best Practices

Recent layoffs? Invest in the people you keep.

Software development studies show that personnel factors alone amount to a productivity variance of 313%! Be sure your people have up-to-date training.

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Software Estimation

3 days - 18 PDU's

Often called a 'wicked problem' due to unknown obstacles, software estimation can be managed and performed successfully by using these time-tested best practices.

What you'll learn in class

- Five categories of software estimates, and when each one is best used
- The 'Cone of Uncertainty'
- Risks associated with estimating software schedules and effort levels
- Informal top-down and bottom-up estimation techniques
- Formal parametric estimation techniques
- Project size forecasting using Fuzzy Logic and T-Shirt Sizing
- Project size forecasting using decomposition: Analogy, Expert Judgment, Wide-Band Delphi, and Planning Poker
- Project size baseline estimating using Function Point Analysis: IFPUG, NESMA, SEER-SEM, 3D, MKII
- How to estimate software project schedules using COCOMO II
- How to estimate software project schedules using Putnam's Model
- How to estimate software project sizes using COSMIC-FFP
- How to lower the risk of estimation error
- How to track project progress with control estimates
- How to estimate remaining defect levels in tested code
- How to determine which software development phases in your organization are most and least efficient at finding defects
- How to calculate your organizations Process Productivity and Manpower Buildup Indexes (Putnam)
- How to resolve executive-team project target pressure
- How to create a project control chart (Burnup Chart)
- How to create a department or company-wide software estimation procedure
- How to create and use a software estimation results historical log for the department and for individuals

Migrating to MySQL

1 day

MySQL 5.x is a full-grown enterprise database—and it's free!. Learn why Google, Yahoo, and many other companies are realizing tremendous cost savings by switching to this free platform.

What you'll learn in class

- The history of MySQL
- Platform options
- Installing MySQL on a Windows server
- Configuring MySQL
- Footprint overview
- Using multiple DB's on the same Server
- Optional support licensing options
- Command line navigation
- Stored programs (procedures)
- Triggers
- Transaction processing
- Referential integrity
- Full-text search
- Integration with .NET
- OleDB data adapter
- .NET data adapter
- Migrating data from ORACLE or SQLServer
- Migration Tools
- Benchmarks
- Data-type comparisons
- Performance Tuning
- Re-indexing
- Monitoring tools
- Backup/restore
- Replication overview
- Using MySQL in a load-balanced environment to store IIS session state
- Sampling of GUI tools
- Sampling of books

Meet your Instructor

Mike J. Berry has worked in the software industry since 1987. With a degree in Information Systems and Technologies from Weber State University and twenty years of industry experience, he has worked and consulted locally for both small and large companies in the Salt Lake Valley. He has managed large teams of software developers, project managers, software testers, database administrators and produced separate enterprise software applications that have been used in over 2500 banking branch sites, 600 medical clinics, and multiple distribution offices in 12 countries. He has studied with the best industry thinkers of our time, and his work has taken him all over the US, to Europe and the South Pacific. He is a certified Project Management Professional (PMP), is certified in ITIL v3, holds two Agile Development certifications, is the present vice-chair of the Utah iEEE Computer Society, is the secretary of the iEEE national voting data security standards workgroup, and is a member of the iEEE 1175.5 object modeling standards interchange workgroup. Find out more about Mike by reading his blog located at: http://blog.redrockresearch.com.

Registration

Register for our seminars online at http://www.RedRockResearch.com. Registration closes one week prior to the seminar start date. Our seminars start at 9:00 am (8:30 registration) and end at 4:30 pm. Participants will be provided with coursework, pen and paper for note-taking, and a certificate of completion. Laptops are welcome. Breakfast and lunch are provided. Please contact us for any special dietary needs.

Training Venues

Salt Lake City, Utah

Red Rock Research is based in Salt Lake City, Utah. Our public seminars are held at the Salt Lake Community College Professional Development Center (Miller Campus), Transportation to and from the Salt Lake International Airport is approximately 30 minutes. For directions to the location, please visit: http://www.slcc.edu/locations/miller.asp#driving or visit our website.

Park City, Utah

Our Park City, UT courses are held at Hotel Park City. Transportation to and from the Salt Lake International Airport is approximately 35 minutes. For up-to-date venue information about a specific course presented in Park City, visit our website.

Moab, Utah

Our Moab, UT courses are held at a local facility near Arches and Canyonlands National Parks. An airport shuttle is available to and from the local Moab Canyonlands airport (airport code: CNY). For up-to-date venue information about a specific course presented in Moab, visit our website.

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Seminar dates are subject to change or cancellation. In the unlikely event of a change or cancellation, the total purchase price of the seminar will be refunded to you. Please see our website for an up-to-date seminar schedule.

Our mission is to empower our customers to find the right people, identify the right strategies, and use the right tactics and execution practices to enable them to deliver high-performance software on-time, on-budget, and at desired quality levels. We accomplish these things through research, education, feedback, consulting, continuous learning, and long-term relationships.

Software Development
seminars and consulting