

PROCESS IMPACT

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Description: eLearning Course “Project Management Best Practices”

Description: Managing software projects is difficult under the best circumstances. You can reduce the difficulty and improve your chances of success by applying known industry best practices for software project management. Best practices are based on industry studies of successful and failed projects, and on the instructor’s personal experience. This eLearning course presents 30 such best practices, grouped into five categories:

- Laying the foundation for success
- Planning the project
- Estimating the work
- Tracking your progress
- Learning for the future

Several topics are discussed in depth, including software risk management and the Wideband Delphi estimation technique. The student will have an opportunity to try many of these techniques through a variety of practice sessions. This course partially addresses several of the knowledge areas in the Project Management Body of Knowledge (PMBOK), as well as portions of the following process areas in the Capability Maturity Model Integration (CMMI): Project Planning, Project Monitoring and Control, and Risk Management.

Objectives: On completion of this course, the student will be able to:

- Describe and apply many practices for different aspects of project planning, estimation, and tracking.
- Build a project risk list.
- Participate in or lead a wideband Delphi estimation session.
- Select appropriate practices to enhance his own project management effectiveness.
- Build on the preliminary project-specific deliverables developed during the course.

Audience: This course will be useful to both new and experienced software project managers who wish to learn better ways to plan, estimate, track, and manage their software projects. The techniques described are also applicable to non-software projects.

Components: 9 course modules
164 slides
7.5 hours of audio presentation
19 practice sessions
7 quizzes
“Project Initiation Handbook”
6 magazine articles, 8 templates, and various procedures and work aids

Outline: eLearning Course “Project Management Best Practices”

Module 1: Objectives and Agenda (15 minutes)

Module 2: Introduction to Project Management (29 minutes)

- A. Definition of project management
- B. Goals of software project planning and software project tracking
- C. Project management in the CMMI and the Project Management Body of Knowledge
- D. Practice session: Project management problems on the student’s projects

Module 3: Laying the Foundation (77 minutes)

- A. Project success criteria and business objectives
- B. Practice session: Your stakeholders
- C. Practice session: Your business objectives and success criteria
- D. Product vision and project scope
- E. Practice session: Product vision statement
- F. Project drivers, constraints, and degrees of freedom
- G. Practice session: Your project’s flexibility diagram
- H. Product release criteria
- I. Practice session: Your product’s release criteria
- J. Negotiating commitments
- K. Practice session: Your commitments
- L. Quiz

Module 4. Planning the Project (82 minutes)

- A. The software project management plan
- B. Practice session: Your project plan
- C. Work breakdown structures
- D. Decomposing tasks to inch-pebble granularity
- E. Timebox development
- F. Software development life cycles
- G. Practice session: Your project life cycle
- H. Creating planning worksheets for common tasks
- I. Planning do to rework after quality control tasks
- J. Managing assumptions and dependencies
- K. Practice session: Your assumptions and dependencies
- L. Planning time for process improvement
- M. The learning curve
- N. Quiz

Module 5. Software Risk Management (53 minutes)

- A. Elements of risk management
- B. Options for dealing with risks
- C. The risk management cycle
- D. Examples of software risks in various categories
- E. Software Engineering Institute’s taxonomy of risks
- F. Practice session: Your risk list
- G. Documenting risks
- H. Practice session: Documenting your risks
- I. Risk management plan template
- J. Risk management guidelines and worst practices
- K. Quiz

Module 6. Estimating the Work (68 minutes)

- A. Elements of project estimation
- B. Estimating based on effort
- C. Don't over-schedule multitasking people
- D. Record estimates and how you derived them
- F. Estimation tools
- G. Contingency buffers
- H. Practice session: Your contingency buffers
- I. Quiz

Module 7. Wideband Delphi Estimation (24 minutes)

- A. Wideband Delphi process flow
- B. Planning the Wideband Delphi session
- C. Kickoff meeting
- D. Entry criteria
- E. Individual preparation
- F. Estimation meeting
- G. Assemble tasks
- H. Review estimation results
- I. Exit criteria
- J. Practice session: Applying Wideband Delphi on your project
- K. Quiz

Module 8. Tracking Your Progress (71 minutes)

- A. Recording estimates and actuals
- B. Project tracking tools
- C. Tasks are complete only when 100% complete
- D. Tracking with earned value
- E. Re-planning the project
- F. Practice session: Re-planning your project
- G. Tracking key project metrics
- H. Practice session: Goal-question-metric
- I. Open and honest status tracking
- J. Quiz

Module 9. Learning for the Future (37 minutes)

- A. Project retrospectives
- B. Lessons learned
- C. Practice session: Your lessons learned
- D. Quiz
- E. Practice session: Solutions to the problems from the practice session in Module 2
- F. Practice session: Charting your path forward to improved project management practices