

# Software Project Management

## **Duration**

3 days

## **Instructor**

Philippe Kruchten

## **Class Limit**

20 students

## **Prerequisite**

None

## **Price**

On-site

Please contact SPC  
for pricing (contact  
information on page 2)

Public Training

\$1,645 (3 days)

\*Discount available for  
early registration

## **Materials Provided**

- Student manual containing the course slides
- Student handouts with class exercises

Software is hard to manage. While there is a wealth of information on project management, only a small fraction is directly applicable to managing software projects. What makes it so different and difficult? Why do traditional approaches to project management used in other industries fail in software endeavors? This course is about new practices and new ideas that project managers can use to make their software development projects succeed.

Software Project Management includes a critique of the “thermostat model” of management of WBS (Work Breakdown Structure), Gantt and PERT charts, and much of the common wisdom represented in the PMBOK. A thorough review of the new breed of techniques and tools more suited to software development will also be presented: XP, Scrum, Lean Development, Adaptive development, and RUP. Attendees will learn how to reconcile the new with the old.

At the end of the three-day course, participants will have a complete view of the software project manager role and the multiple activities it entails. They will have a framework to reason about planning and running a software project, and an understanding of the specific techniques applicable to software.

## **Intended Audience**

This course is ideally suited to software developers moving into a team leader or project management role. Software project managers who want to move from traditional approaches to agile processes, software project managers preparing a PMP certification, or experienced project managers with little or no experience in software development will also benefit.

## **Prerequisites**

Some practical experience of software development projects will be useful.

## **Instructor**

Philippe Kruchten is a professional software engineer with 30 years of industrial experience developing large-scale software-intensive systems in the areas of telecommunications, aerospace, defense, transportation, and software tools. He is responsible for the development of the software development method, the Rational Unified Process®.

Philippe also developed a model for the representation of software architecture, based on multiple coordinated views, which led to an IEEE standard.

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# Software Project Management

## Outline

### Managing Software Projects

- Types of software projects
- What makes a software project different and difficult
- Software project management and software development process
- The PMBOK
- CMMI
- The Rational Unified Process (RUP) framework
- What do software project managers manage?

### Managing Risks

- Defining success and failure
- What is a risk?
- Taxonomy of software project risks
- The project risk list
- Introducing iterative development to better manage risks

### Managing Time

- Software development lifecycle
- Phase and iterations in RUP
- Estimations from COCOMO to Use Case points
- Phases and iteration planning

### Managing Quality

- What is software quality?
- Its relationship with software testing
- Process quality and product quality
- Reviews and inspections
- Assessing quality
- Measurements

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For more information on this or other SPC Springboard courses, please visit [www.spcspringboard.com](http://www.spcspringboard.com) or e-mail SPC at [info@spc.ca](mailto:info@spc.ca)

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## Outline Cont'd

### Managing Objective and Scope

- The feature/cost/time dilemma
- Managing requirements and requirements creep
- Earned value systems and burn-down charts
- Time boxing
- Scrum

### Managing Complexity

- Software project management and software architecture
- The architect and the manager
- Project dynamics
- Keeping track of decisions and rationale
- Program management and portfolio management

### Managing Changes

- Types of changes
- Defects and enhancements
- Classification and priorities
- Project backlog
- Tracking changes

### Managing Software Assets

- Software as an asset
- Configuration management
- Software reuse
- Intellectual property issues

### Managing People

- Skills and competencies
- Role versus individuals
- Team structure, distributed team
- Intercultural factors
- HR issues
- Software development ethics

### Managing External Stakeholders

- Software acquisition; iterative or progressive
- Outsourcing and offshoring

### Managing the Software Process

- Just the right process
- Process implementation project
- SEPG, and software process improvement
- Post-mortem and retrospectives.

### Managing Software Projects: Wrap Up

- Putting it all together
- Sources of information



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