

PSP FOR ENGINEERS I: PLANNING AND PSP FOR ENGINEERS II: QUALITY

Course Description

These two one-week courses, Personal Software Process (PSP) for Engineers I: Planning and Personal Software Process (PSP) for Engineers II: Quality, teach software engineers the principles, concepts, and benefits of the PSP, a process-based approach for developing software. Students who complete the two courses will be able to apply the PSP methods to their own personal work process and participate on a Team Software Process (TSP) team. Students learn how to measure and analyze their personal software processes, use process data to improve their personal performance, and apply PSP methods to other structured tasks.

To be considered a PSP-trained engineer, a student must complete both PSP for Engineers I: Planning and PSP for Engineers II: Quality. Students learn the PSP by completing the assigned reading, attending the class lectures, and completing the assignments. Students should plan to spend from 125 to 150 hours in total to complete PSP for Engineers I and II. The total course completion time includes two weeks of class time, plus an additional week to complete the pre-reading and post-class homework.

Audience

- software engineers
- software engineering instructors
- software quality management instructors
- third-party vendors of software engineering or quality training

Prerequisites

Before registering for these courses, participants must be proficient in at least one programming language (**Excellent programmers with inquisitive minds**). Due to the quick pace of the courses, students will not be successful if they use this course to learn a new language. **Students must bring their Personal Portable Computer**

Topics

- introduction to personal process
- size measurement
- size estimating
- proxy-based estimating
- resource estimating
- process measurement
- defect management
- the design process
- design verification
- scaling up to TSP
- using the PSP and TSP

Objectives

This course will help participants to

- understand the PSP process-based approach for developing software
- measure and analyze their personal software processes
- use process data to improve their personal performance
- apply PSP methods to other structured tasks

For More Details Kindly Check : <http://www.sei.cmu.edu/products/courses/psp/psp.trng.html>

INTRODUCTION TO PERSONAL PROCESS

Course Description

This two-day course prepares students to participate on Team Software ProcessSM (TSPSM) teams. The course covers the key concepts and principles of the Personal Software ProcessSM (PSPSM) at a high level so that students understand the terminology and the philosophy behind the method. Students are guided through a series of lectures and exercises that teach the PSP process and prepare them to plan and track their work as part of a TSP project team.

The course is designed for system, hardware, and test engineers, technical writers, trainers, and others who are not software engineers but who will be participating on a TSP project. It is also appropriate for members of integrated product development teams that are building software-intensive systems. Successful completion of the course will enable participants to understand the rationale and foundational concepts behind the PSP and TSP; to develop ways to measure the size, time, and defects in their work; to use the PSP planning framework to plan and track tasks; and to use the PSP quality strategy to manage the defects in their work and support the team's quality goals.

Audience

- System, hardware, and test engineers, technical writers, trainers, and others who are not software engineers but who will be participating on a TSP project
- Members of integrated product development teams that are building software-intensive systems

Prerequisites

There is no prerequisites for this course.

Topics

- PSP process framework
- measurement in the PSP
- defining a personal process
- PSP planning framework
- estimating and scheduling
- in-process control and tracking
- defect management
- process analysis and improvement
- Team Software Process

Objectives

Successful completion of this course will enable participants to

- understand the rationale and foundational concepts behind the PSP and TSP
- develop ways to measure the size, time, and defects in their work
- use the PSP planning framework to plan and track tasks
- use the PSP quality strategy to manage the defects in their work and support the team's quality goals

For More Details Kindly Check : <http://www.sei.cmu.edu/products/courses/intro/intro-psp.html>

N.B.: No "PSP for Engineers" attendee would benefit from the intro class. This one is for non-programmers

MANAGING TSP TEAMS

Course Description

This three-day course for first-line managers or team leaders of Team Software ProcessSM (TSPSM) software development teams covers the key concepts and principles of the TSP and the Personal Software ProcessSM (PSPSM). The purpose of the course is to provide managers and team leaders with the knowledge and skills they need to effectively lead and coach TSP development teams.

Organizations that develop software recognize that controlling their software process significantly affects their ability to be successful in business. However, organizations still struggle when trying to apply disciplined methods in the software process. Historically, this struggle has been due to a lack of operational procedures that teams and individuals can use to develop software in a disciplined fashion.

The TSP was designed to provide both a strategy and a set of operational procedures using disciplined software process methods at the individual and team levels. At the individual level, the PSP shows managers and engineers how and why to plan and track their projects, demonstrates the principles and benefits of effective quality management, and involves the engineers in process measurement, management, and improvement. At the team level, the TSP builds accurate, achievable plans for software projects teams, provides a formal team-building process, and provides the mechanism for tracking progress against project plans.

Audience

First-level software managers who directly manage software development, such as

- software project managers, software team leaders, supervisors

Prerequisites

There s no prerequisites for this course.

Topics

- a strategic perspective of software development, its problems & possible solutions to those problems
- an overview of the PSP and how it provides a means for introducing sound engineering practices into software engineering work
- an overview of the TSP and how it works to build self-directed high-performance teams
- rational management (managing with facts and data) and why this type of management is required to maintain successful TSP teams
- quality during software development, how TSP teams measure and manage development quality, and produce quality products
- introducing TSP into an organization
- the TSP launch process, how the team builds their work plan and negotiates their commitment with management
- the TSP team working process
- elements of a disciplined process, the PSP initial process
- disciplined planning at the individual level, the PSP planning process
- understanding process data at the individual level, coaching an engineer based on process data
- team management in a TSP team, the role of the team leader
- understanding process data at the team level, coaching the team based on process data

Objectives

Successful completion of this course will enable participants to

- describe the basic concepts on which the TSP is built, and how the TSP can effectively improve software development activities and provide positive motivation for engineers and project teams
- provide a working-level understanding of how individuals and teams apply the TSP
- show key behaviors to successfully leading and coaching TSP teams

For More Details Kindly Check : <http://www.sei.cmu.edu/products/courses/psp/psp-manage-engs.html>

TSP EXECUTIVE STRATEGY SEMINAR

Course Description

This two-day introductory course for software executives and middle managers covers the key concepts and principles of the Team Software ProcessSM (TSPSM) and Personal Software ProcessSM (PSPSM) from a management perspective. The purpose of the course is to provide the foundation that managers need to begin to introduce and apply the TSP in their organization.

Organizations that develop software recognize that controlling their software process significantly affects their ability to be successful in business. However, organizations still struggle when trying to apply disciplined methods in the software process. Historically, this struggle has been due to a lack of operational procedures that teams and individuals can use to develop software in a disciplined fashion.

The TSP was designed to provide both a strategy and a set of operational procedures using disciplined software process methods at the individual and team levels. At the individual level, the PSP shows managers and engineers how and why to plan and track their projects, demonstrates the principles and benefits of effective quality management, and involves the engineers in process measurement, management, and improvement. At the team level, the TSP builds accurate, achievable plans for software projects teams, provides a formal team-building process, and provides the mechanism for tracking progress against project plans.

Audience

- executives and middle managers who are responsible for software development or maintenance
- managers who are responsible for software support areas such as software quality assurance, software engineering process groups, systems or hardware engineering, documentation, or finance

Prerequisites

There s no prerequisites for this course.

Topics

- a strategic perspective of the software business, its problems and possible solutions to those problems
- an overview of the PSP and how it provides a means for introducing sound engineering practices into software engineering work
- an overview of the TSP and how it works to build self-directed high-performance teams
- rational management (managing with facts and data) and why this type of management is required to maintain successful TSP teams
- quality during software development, how TSP teams manage development quality and produce quality products
- introducing TSP into an organization

Objectives

This course will help participants to

- describe the basic concepts on which the TSP is built
- describe how the TSP can effectively improve software development activities and provide positive motivation for engineers and project teams
- show how to use the TSP to address current and future software needs
- describe how to successfully introduce and maintain TSP
- show what management must do to help their teams be successful

For More Details Kindly Check : <http://www.sei.cmu.edu/products/courses/tsp-exsem.html>