Stanford Advanced Project Management Certificate

Executing Complex Programs (XAPM221)

Sample Syllabus

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Introduction and Overview
Using an innovative interactive design challenge, we will explore the criticality of programs in business and the importance of program focus to the overall success of executing complex programs. We will address the flux in program focus and decisions over time and within the typical day as faced by leaders of complex programs.

Program Initiation: The Art of the *GreatStart*
The "Art of the GreatStart"--why program initiation is critical to ensure a successful complex program. We will explore the role of planning, strategy, and decisions in enabling program GreatStart Together these support the design and sustaining of a resilient program that can handle the inevitable challenges that complex efforts face. We will learn how planning works, strategy counts, and decisions matters . . . a great deal.

Cross-Functional Teams
Cross functional teams are the arteries of today's firms. They fill the gaps in a firm's organizational chart, and because of this, their role is critical: they act as the glue that holds the disparate parts of a firm together and play the central role in executing the critical functions of a firm. In this session we will explore challenges that are often associated with cross functional teams and ways to remedy them.

Understanding Program Interdependencies
In this session, Professor Levitt introduces a simple framework for identifying and managing different kinds of interdependencies. The framework will arm you with approaches for dramatically improving project interface management.

Managing Complex Program Interfaces and Interdependencies
Both the planning and managing of a complex program require intense focus on the myriad interfaces and interdependencies that must be identified and managed during the course of the program. This requires identifying, characterizing, and prioritizing those I^2s of interest; ensuring they are actively managed; and, learning and sharing from the management of the I^2s of interest. We will explore tools and approaches for ensuring that I^2s are incorporated in program planning and management.

Predictable vs. Uncertain Programs
In this session we will discuss traditional project management techniques versus agile project management 2.0 techniques. In particular, we will discuss the role of uncertainty in project management approaches, including organizational structure and cultural consideration. We present the result of a large-scale study on project management for highly uncertain projects jointly conducted by Stanford University and McKinsey & Company

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Agile Management of an Organization Change Program

How can you unlock extraordinary business value for your company? This module presents a case study of salesforce.com big-bang switch to agile software development methodology. We will articulate concrete techniques to build a learning organization to effect change. .Should you transition your organization to agile all at once or proceed more iteratively, team by team? This talk describes Salesforce.com's year of living dangerously where we moved our entire R&D organization to an agile model. The key difference in our approach was to throw the switch on 30 teams all at once.

High Reliability Organizations

Leaders of complex programs can learn from the practices used by organizations that face continuing challenges, even death, during their complex operations. These organizations, high reliability organizations (HRO), exhibit critical factors that can be used in leading programs. We will explore these in this module: learning from failure, resisting oversimplification, focusing on operations, understanding the power of resilience, and fully using the range of skills and expertise of your team.

Mars Rover Project

In the late 1990's, NASA's Jet Propulsion Lab (JPL) was facing a serious crisis. The failures of both Mars Climate Orbiter and Mars Polar Lander in September and December 1999 were traumatic experiences not only for those intimately involved in the mission, but also for the U. S. Mars Exploration Program and the scientific community in general. In this session we will discuss complex challenges that NASA Mars program faced in Spring of 2000 and the steps that were taken to transform the program.