Stay Current with the Latest Product Development Practices!

Are you involved in the development and release of physical products? Do you need to stay current with the latest product development practices? Could you use an edge to get back into the job market? If so, the Product Realization Certificate program at National University can help.

The program provides a comprehensive framework of the product development process including recent shifts in outsourcing, off-shoring, and environmental regulations like REACH, RoHS, and WEEE. Whether you are a business leader, group manager, or individual contributor you will learn strategies for bringing different products to market and solutions that drive improvements in cost, quality, and time-to-market.

All courses are taught with a mix of interactive lectures, student workshops, and real-world assessments. Subject-matter experts in the field will teach you how to:

- Apply the latest product realization practices to be more competitive
- Understand the historical perspective and appreciate how strategies vary by industry and product type
- Integrate the engineering environment more fully into the product realization process to reduce time-to-market
- Employ Product Lifecycle Management systems to enable best practices for configuration management/change control and streamlined operations
- Structure the supply chain to lower costs, improve manufacturability, simplify ongoing support, and feedback downstream issues to product development

The Product Realization Certificate program starts in September 2009. Classes are held during the evenings once per week.
Course Descriptions

IST 1811X: Product Realization Overview
This course provides an overview of the latest trends and best practices in the Product Realization Process (PRP). An emphasis is placed on how each functional area operates and collaborates to successfully bring products to market. You will learn about the Preliminary Needs Assessment (PNA) as a resource to streamline operations, enable sustainable growth, and improve product quality. Using case methodology, you will document current processes, identify gaps, propose solutions, and measure ongoing performance.

IST 1812X: Product Realization Strategies
New product introduction strategies vary widely in their approach. They are influenced by factors such as industry type, company size, competition, supply chain structure, and regulatory environment. The purpose of this course is to teach you what strategies should be considered, assess the tradeoffs and impact on the Product Realization Process (PRP), and enable their implementation. Using your findings from the Preliminary Needs Assessment (PNA) you will choose strategies that yield the highest return on investment.

Prerequisite: IST 1811X

IST 1813X: The Engineering Environment
Engineering is the life blood of any high-technology business and drives the success or failure of new products. This course examines the strategies, tools and processes that are fundamental to a high-performing engineering environment. We discuss interdisciplinary relationships and deliverables at key phases of the Product Realization Process (PRP). Using case methodologies, you will evaluate a company’s product development and sustaining engineering practices, identify gaps relative to best practices, and develop recommendations for improvement.

Prerequisite: IST 1811X

IST 1814X: Configuration Management and Change Control
Compressed product life cycles and globalization have increased pressures on an already strained product realization process and elevated the need for configuration management as the last defense between chaos and order. This module presents best practices for configuration management and change control by examining real world situations to understand the impact that they have on the enterprise. You will utilize benchmarking concepts to better understand product structure and control, as well as demonstrate comprehension of the Item Master and its role in product definition.

IST 1815X: Supply Chain Management
The supply chain is strained to the breaking point by increased globalization, environmental regulations, product complexities, and cultural differences. In this course you will learn the latest techniques for exchange, control, and management of product information to improve quality and reduce costs across the supply chain. These include Product Lifecycle Management (PLM), parts data content, and design / manufacturing collaboration. An open panel discussion of industry experts will discuss real world challenges and solutions that they have successfully applied to optimize the supply chain.

Prerequisite: IST 1811X

IST 1816X: Product Realization Capstone
Because companies today are so divided by physical and functional separations, there are opportunities to dramatically improve business performance through better integration and management of information across the enterprise. Drawing on the knowledge gained from the curriculum, you will walk through real company challenges and develop business improvement recommendations to present at the final session. This course draws together the principles, concepts, techniques, and tools learned throughout the certificate program to gain a holistic view of the product realization process.

Prerequisites: IST 1811X, IST 1812X, IST 1813X, IST 1814X, and IST 1815X

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