PROFESSIONAL DEVELOPMENT

Certificate in

Service-Oriented Architecture

WHEN BUSINESS AND IT COLLIDE…

Many technological tools have been created and adopted to improve business processes and performance. However, business challenges often require more than technical tools to overcome them. Disjointed technologies only lead to further silos of information.

Service-Oriented Architecture (SOA) offers great potential in creating an enterprise infrastructure that fully integrates technology and business processes, allowing business agility and a free flow of information between the various units, locations, functions, and entities.

SOA is not a one-dimensional IT product. It is a sophisticated and multi-faceted process that helps eliminate barriers created by a lack of technological and business integration.

This program consists of two certificates to help you on your road to SOA.

- The **Certificate in Service-Oriented Architecture: Agile Enterprise** will help both business and IT professionals gain a better understanding of SOA concepts, infrastructure and management. The program focuses on developing the skills needed to influence knowledgeable enterprise-wide decisions to support the adoption of SOA. Topics include:
  - SOA principles
  - Business Process Modeling (BPM)
  - Business architecture for SOA
  - Governance structure that ensures agility

- The **Certificate in Service-Oriented Architecture: Implementation** continues the SOA discussion to provide IT professionals with the comprehensive skills and understanding
  - Implementation of infrastructure to support SOA
  - Implementation standards
  - Designing and building service packages

Register today at www.csufextension.org or 657.278.2611
For more information, contact Kristyn Hursh: 657.278.7427, khursh@fullerton.edu

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Certificate in Service-Oriented Architecture

THE CLASSES

REQUIRED Classes for Both Programs

TRANSFORMATIVE THINKING: SOA PRINCIPLES

(6 hours/0.6 CEUs)

Prerequisite: none. Creating a Service-Oriented Architecture (SOA) to facilitate business processes requires an overhaul of traditional beliefs in separated business decision-making and IT implementations. To fulfill the promises of SOA, business leaders and technology experts in an organization need to embrace a new working dynamic. Participants in this class will gain a better understanding of the fundamental principles defining SOA and the reality of SOA adoption. Participants will apply SOA principles learned in creating a preliminary proposal for an SOA based project.

ELEMENTS OF SERVICE ORIENTED SYSTEMS

(9 hours/0.9 CEUs)

Prerequisites: none. The first step in the actual development of a Service-Oriented Architecture (SOA) involves mapping out an enteprise infrastructure. SOA can ensure the efficient exchange of business critical information as well as facilitate process fluidity. By gaining an understanding of the various elements which facilitate successful development, implementation, and continuous improvement of SOA projects, participants in this class will be able to discuss the role of Enterprise Service Bus (ESB) and Business Process Management (BPM). Class discussions will also focus on enterprise architectural development, risk management, and data structure with SOA as an end goal.

BUSINESS ARCHITECTURE & SOA PATTERNS

(12 hours/1.2 CEUs)

Prerequisite: Elements of Service Oriented Systems class. In this class, the participants will learn the various approaches to construct Service-Oriented Architecture (SOA) and the technologies behind them. Through case studies, participants will learn to identify the best path to SOA implementation through an intelligent analysis of business architecture. Designed for both business managers and IT professionals, class discussions will also focus on design pattern language for service inventory and architectural and service design to allow the sharing of a common language by both groups.

GOVERNANCE: KEY TO SOA SUCCESS

(9 hours/0.9 CEUs)

Prerequisite: none. One element commonly overlooked in Service-Oriented Architecture (SOA) development is the inclusion of a governance structure. To fully realize the potential of SOA an organization needs to constantly monitor business needs, examine technological ability, and analyze business processes so SOA does not fall short of its promise for agility. Systems administration and monitoring committed to the continuity of service-oriented functions, lifecycle management, as well as security management in an environment where there is a free-flow of information are challenges to be addressed collaboratively by both business and technology professionals. Governance structure and tools as well as strategies to benchmark the development and adoption of SOA will also be discussed in-depth.

Additional REQUIRED Classes for Implementation Program

BUILDING A SERVICE-ORIENTED INFRASTRUCTURE

(12 hours/12 CEUs)

Prerequisite: Elements of Service Oriented Systems class. As an organization moves to implement Service-Oriented Architecture (SOA), technology professionals in the organization play a critical role in building and maintaining the organization's technical capacity to continuously support these initiatives as needs arise. To do so, technology professionals not only need to be involved in the creation of business frameworks but also need to be driving the construction of technical infrastructure. In this class, architects, systems designers, administrators and programmers will learn where technical professionals can make the greatest contribution in discussions relating to BPM, information management, security management, and data management.

STANDARDS OF INTEGRATION

(6 hours/0.6 CEUs)

Prerequisite: none. Standards for tools of integration apply when undergoing Service-Oriented Architecture (SOA) implementation. Architects, systems administrators, programmers, developers and other IT professionals need to understand the proper application of standards in order to design a system with integrity and consistency. This important class will review standards that are familiar while introducing others that have specific relevance to SOA. SOA Reference Model (SOA-RM) and Simple Object Access Protocol (SOAP) will be discussed in additional to other standards.

DESIGNING AND BUILDING USER-CENTRIC SERVICES

(12 hours/1.2 CEUs)

Prerequisite: Building a Service-Oriented Infrastructure class. The designing and construction of specific services brings Service-Oriented Architecture (SOA) to life. The technical experts taking on the challenge will benefit greatly from this class by gaining a better understanding of how approaches such as loose-coupling can lend a service package more power. With consideration for long-term impacts, the class will discuss the benefits and shortcomings of various approaches of design as well as the necessary elements to be built into a design to ensure security, integrity, and longevity. Through group work, participants will learn about run-time management, security strategy development, and other critical steps.

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