

Certificate in

# Information Technology Architecture

PROFESSIONAL DEVELOPMENT

## CREATE A VISION FOR IT INFRASTRUCTURE

Ensuring competitiveness is the key to outlast this economic downturn for IT professionals. The Certificate in Information Technology Architecture will assist IT professionals in demonstrating contemporary skills that outshine – allowing them to transition into more integrated functions and engage in a broader range of responsibilities.

*InformationWeek* Magazine published its annual IT professional salary survey in April 2009 which found that:

*By title, IT architects top the [salary] list again this year, the only staff job with median pay above \$100,000... There continue to be a premium on skills around architecture [and] integration...*

Just as a building architect is the overall visionary for the final outcome of the building, an IT architect creates a vision for the final IT infrastructure with knowledge in programming and engineering as well as business. IT architecture also engages in anticipating risk and challenges, analyzing user-experience, managing, and communicating effectively to a diverse audience.



Upon completion, graduates will be able to:

- explore the areas of specialization in IT architecture
- define business goals and successfully align IT development with overall organizational goals
- effectively communicate and influence multiple stakeholders in decision making
- apply best practices in the architecting of IT projects

## WHO SHOULD ATTEND

- Software Developers and Programmers with 3-5 years of experience
- Systems Engineers
- Software Designers
- Enterprise-wide Systems Administrators
- Database Administrators
- Information Technology Security Management

Register today at [www.csufextension.org](http://www.csufextension.org) or 657.278.2611

For more information, contact Denelle Pankratz: 657.278.2605, [dpankratz@fullerton.edu](mailto:dpankratz@fullerton.edu)

## THE CLASSES

The Certificate in Information Technology Architecture consists of nine required courses totaling 87 hours of lecture and discussion. 8.7 Continuing Education Units (CEUs) will be awarded to the certificate graduate.

### INTRODUCTION TO INFORMATION TECHNOLOGY ARCHITECTURE

**SECS 6599 (0.3 CEUs/3 hours)**

Prerequisite: none. Instead of blueprints, plywood, pipes and construction workers, information technology architects work with process maps, servers, codes, and programmers. Architects see beyond the micro lens of individual strings of codes to encompass the overall goal of an IT project. The class will focus on the various roles and areas of specialization for architects.

### MANAGING DESIGN AND DEVELOPMENT INNOVATION

**SECS 6600 (1.5 CEUs/15 hours)**

Prerequisite: none. Architect of a project must fully understand the fundamentals of design as well as manage each step of the process to avoid "scope creep". Starting with research, design, resource planning, project management, testing, and lifecycle management, this class focuses on providing a comprehensive understanding of the process involved in architecting an IT project.

### SOFTWARE ARCHITECTURE

**SECS 6601 (1.2 CEUs/12 hours)**

Prerequisite: Managing Design and Development Innovation. Architecture in the development of software requires consideration in functionality, structural elements, relationships between the various components, and to a smaller extent, the impact on the overall system in which the software operates. Topics on system decomposition, data infrastructure, security, and structural integrity are explored.

### USER-EXPERIENCE ARCHITECTURE

**SECS 6602 (0.9 CEUs/9 hours)**

Prerequisite: Managing Design and Development Innovation. User-experience has been largely overlooked in development processes due to a lack of awareness. However, with growing focus on user-centric and service-oriented outcomes, user-experience design has come to the forefront of architectural discussions. This class will highlight the elements that can transform design usability while developing the perceptiveness necessary to address the needs of the end-users.

### INFORMATION ARCHITECTURE

**SECS 6603 (0.9 CEUs/9 hours)**

Prerequisite: Managing Design and Development Innovation. Information architecture addresses the need to develop a roadmap for the effective storage, organization, and retrieval of data. The data infrastructure may be driving a software in the background or may be the main framework facilitating the function of an entire organization. Participants in this class will take an in-depth look at information management practices that enable efficient data retrieval, knowledge management, and higher level business functions such as predictive analysis.

### INFRASTRUCTURE ARCHITECTURE

**SECS 6604 (0.9 CEUs/9 hours)**

Prerequisite: Managing Design and Development Innovation. Infrastructure architects are responsible for setting a vision for the interlacing of systems, networks, data management and business operations. This class addresses the best practices in the integration of critical components of systems architecture including data, network, security, operation and governance structures.

### SECURITY ARCHITECTURE

**SECS 6605 (0.9 CEUs/9 hours)**

Prerequisite: Managing Design and Development Innovation. Security has become a topic attracting front-and-center attention in the field of information technology. Effective security architecture in software and infrastructure design greatly reduces the chance a system can be compromised. With discussions on adaptive pattern detection, defense policies, and authentication strategies, participants will be better equipped to make sound security decisions in the design process.

### LEADING BUSINESS AND IT ALIGNMENT

**SECS 6606 (1.2 CEUs/12 hours)**

Prerequisite: Managing Design and Development Innovation. Architects spend the majority of their time on the front-end of a project. The most critical function of an architect's job is to align business goals and information technology capabilities. This requires knowledge in organizational design and business strategies as well as a clear understanding of technical limitations. The focus of this class will be to help the participants develop an understanding of business functions, models, and operations as it relates to the architecting of software or technology infrastructures.

### THE HUMAN FACTOR: PEOPLE MANAGEMENT

**SECS 6607 (0.9 CEUs/9 hours)**

Prerequisite: none. The architect of a project is the hub of all communications relating to the project. This class will address the relationship dynamics that an architect must manage and navigate. Approaches to managing peers and a team of subordinates as well as "managing up" using the power of persuasion and influence will be discussed. The development of the ever crucial cross-cultural sensitivity in managing relationships with overseas vendors will also be examined.

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