



# UCIRVINE | EXTENSION

Information Technologies  
Programs

Business Intelligence  
and

Data Warehousing  
Specialized Studies

**Accelerate Your Career**



## Improve Your Career Options with a Professional Certificate

**In today's competitive business market,** leaders are appointed based on credentials and experience. To stay ahead of the competition, advance your career and increase your earning potential, enroll in one of University of California, Irvine Extension's professional certificate programs. Convenient and affordable, UC Irvine Extension makes it easy to learn on your own time, in your own way. Courses are designed to ensure you gain mastery of a particular topic, and instructors are highly qualified leaders in their professions.

UC Irvine Extension is the only continuing education provider in Orange County that represents the University of California. A certificate bearing the UC seal signifies a well-known, uncompromising standard of academic excellence.



### **Business Intelligence and Data Warehousing Specialized Studies**

UC Irvine Extension's Business Intelligence and Data Warehousing Specialized Studies provides practical techniques for creating and building a data warehouse, and using good business intelligence to positively impact the bottom line. Through hands-on, practical courses, students learn how to combine data from disparate sources into a single database, how a data warehouse fits into the overall strategy of a complex enterprise, and how to develop productive data models for business intelligence. Students will also explore how to define and specify useful management reports from warehouse data.

### **Who Should Attend**

This program will benefit data systems modelers, database administrators, data architects, IT managers, business analysts, CIOs and others who need to take data from different sources and combine them into a single repository that can be used to produce executive dashboards, generate summary reports and glean hidden information needed for critical decision making. This program will also be helpful for those who request data in order to analyze trends and systems.

### **Specialized Studies Requirements**

Students must complete all three required courses with a letter grade of "C" or higher in each course in order to qualify for the BIDW Specialized Studies Award. When you have completed your third course, please submit an "Application for Candidacy and Request for Specialized Studies Award." All requirements must be completed within five (5) years after the student enrolls in his/her first course.

Individual course can be taken with Pass/No Pass and Audit grade options for those not requesting the Specialized Studies Award.



**For more information:**

**Julie Pai**

**(949) 824-6333**

**julie.pai@uci.edu**

**extension.uci.edu/bidw**



## Program Benefits

Students completing this program will be able to:

- Explain how a data warehouse combined with good business intelligence can increase a company's bottom line.
- Describe the components of a data warehouse.
- Describe different forms of business intelligence that can be gleaned from a data warehouse and how that intelligence can be applied toward business decision-making.
- Develop dimensional models from which key data for critical decision-making can be extracted.
- Sketch out the process for extracting data from disparate databases and data sources, and then transforming the data for effective integration into a data warehouse.
- Load extracted and transformed data into the data warehouse.

## Program Fees

Individual course fees along with the cost of textbooks, parking, and other supplementary materials are subject to change without notice. For budgeting purposes, you may use the following estimates:

Course fees (3 courses)	\$2085
Candidacy fee	\$35
Textbooks	\$150
<b>Total Estimated Cost</b>	<b>\$2270</b>

## On-Site Training

Bring this program to your workplace. Through Corporate Training, we can deliver this program or customize one that fits your company's specific needs. Visit [extension.uci.edu/corporate](http://extension.uci.edu/corporate) or call (949) 824-1847 for information.



# Curriculum

## Required Courses

### Business Intelligence/Data Warehouse

I&CSCI X425.22 (3 units)

Learn how to make better business decisions, use fewer resources, and improve your company's bottom line by developing and using a data warehouse. This course provides an overview of business intelligence and data warehousing and gives you a look at all the major facets of developing and using a data warehouse to make effective business decisions. You'll work on a single project that allows you to develop a project plan and business case for a data warehouse, develop a dimensional model, develop a data staging process, and develop a data access process. You'll also learn about careers working with business intelligence and data warehousing as well as the educational requirements for this field.

### Designing Dimensional Models

I&CSCI X425.24 (3 units)

Learn how to build a high performance dimensional data model. A good dimensional model and its physical database form the hub of a business intelligence data warehouse, serving as the target of the data integration and as the source of business intelligence data. This course provides both introductory and advanced concepts and techniques for developing effective dimensional models. Learn how to design dimensional models for extensibility, employ a proven dimensional design process, apply the process to several representative situations, and understand a variety of advanced dimensional modeling techniques.

### Designing ETL Processes for Data Warehousing

I&CSCI X425.26 (3 units)

The Extract, Transform, and Load (ETL) process is typically the most time-consuming, misunderstood, and underestimated task in building a data warehouse and other data integration applications. The ETL process addresses and resolves the challenges of extracting data from disparate operational source systems, storing it in the data staging area, profiling data for errors, cleaning

and transforming the data, and mass loading it into the target enterprise data warehouse, data marts, or operational systems. Source systems may include mainframe, relational, ERP/CRM, real-time, web, and desktop systems. Microsoft SQL Server Integration Services (SSIS) will be used as the ETL tool for workshops and homework assignments. Prior knowledge of SSIS is helpful but not required.

## Advisory Committee

- **Allan Elder**, President, Numen Consulting, Inc.
- **Victor Wu**, CTO EmpowerTrain Corp.
- **Patti Lassen**, Lead Systems Engineering, Experian
- **Gary Falacara**, Consultant
- **Fu-Tien Chiou**, Senior Information Architect, Capital Group
- **David Shelton**, IT Director, Pacific Life
- **Kugan Kandasamy**, Consultant
- **Jay Cook**, Consultant
- **Rick Hefner**, Director, Process Effectiveness, Northrop Grumman



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