

Standard Course Outline

IS 640 Business Application Programming

I. General Information

- ♦ Course number: IS640
- ♦ Title: Business Application Programming
- ♦ Units: 3
- ♦ Prerequisites: Graduate Standing
- ♦ Course Coordinator: Melody Kiang
- ♦ SCO Prepared by: Melody Kiang
- ♦ Date prepared/revised: April 26, 2016

II. Catalog Description

Introduce Object-oriented programming concepts and constructs. Analyze, design, and implement Windows-based business applications that fully utilize the Graphical User Interface tools and techniques. Develop a fully functioning enterprise information system that utilizes advanced programming techniques for interacting with the database.

III. Curriculum Justification(s)

Business application program is the core component of an enterprise information system. It can assist the daily operations of all business functions including finance, accounting, marketing, supply chain, human resources, and other aspects of management. To prepare for the future managers of Information Systems, the students need to be able to understand all issues related to trouble shoot and maintain existing information systems, migrating legacy systems, and analyze and design new enterprise information systems that implements state of the art information technologies. The design of a multitier information system allows the separation of user interface from the implementation of business rules and policies, and the database. Hence, it can greatly enhance the flexibility and extendibility of the system and allows it to grow and modify as the business environment changes. .NET framework is a software framework that includes a large class library known as Framework Class Library (FCL) and provides language interoperability across several programming languages. One of the popular .NET programming languages will be selected to develop business application. Learning the knowledge of .NET programming language will greatly enhance the readiness of our Information Systems students for the increasing competition in the digital business environment. In addition, to meet the rising needs of today's business, the course will focus on the development of Business Intelligence applications that require the utilization of advanced database techniques in .NET framework to dynamically retrieve and analyze big data.

Upon completion, the student will meet the following four specific CBA learning goals:

Learning Goal #1 – Critical Thinking

Learning Goal #3 – Interpersonal, Leadership & Team Skills

Learning Goal #5 – Quantitative and Technical Skills

IV. Course Objectives, Student Learning Outcomes, Evaluation Instruments, and Instructional Strategies for Skill Development

Students who pass IS 640 must demonstrate ...

- * understanding of object-oriented programming language concepts,
- * knowledge of .NET framework application at design-time and run-time, Common Language Runtime and .NET Class Libraries,
- * knowledge of user interface design issues and techniques,
- * knowledge of .NET framework language concepts and constructs,
- * knowledge of techniques to link database and .NET application in business,
- * understanding the importance and benefits of a multi-tier system architecture,
- * the ability to design and implement a multi-tier enterprise application,
- * understanding of issues in business application development and management, and
- * ability to use .NET as a platform to develop enterprise applications,

V. Outline of Subject Matter

- * Introduction to the Object-Oriented Programming Language
- * User Interface Design
- * Variables, Constants, and Calculations
- * Decisions and Conditions
- * Menus, Common Dialog Boxes, Sub Procedures, and Function Procedures
- * Multiform Projects
- * Lists, Loops, and Printing
- * Multi-tier system architecture
- * Arrays and Data Files
- * Database Applications
- * Graphics, Animation, and Sound
- * Enterprise Applications

VI. Methods of Instruction

A. INSTRUCTION MODE.

May refer to University policies [Academic Technology and the Mode of Instruction \(PS 03-11\)](#) and [Course Syllabi and Standard Course Outlines \(PS 11-07\)](#), for descriptions of modes of instruction and for guidelines for non-traditional modes of instruction.¹

x Traditional Hybrid Local Online Distance Education

B. CLASSROOM ACTIVITIES. (Optional but highly recommended for core courses)

¹ The university policies listed are active as of 2015-2016 but may be subject to change in the future. For the most up-to-date policies, refer to the Academic Senate website's [Policy Statements](#).

In this hands-on instructor-led business application language course, students learn the fundamental skills that are required to design and develop object-oriented applications for Microsoft Windows using Visual Studio .NET development environment. After each major topic is introduced students undertake short exercises to ensure their understanding of the essential concepts. The course covers all important object-oriented topics you need to understand to develop using .NET framework. Depending on the individual instructors, opportunities for class discussion, group work, and student presentations may be considered. Instructors are strongly encouraged to introduce real-life cases of how the programming language can be used to develop applications for various business functional areas, such as Accounting, Finance, Marketing, Human Resource Management, Operational processes, and General Management. Students will be able to create attractive and useful applications that fully exploit the graphical user interface (GUI). Planning and writing event-driven, object-oriented programs(OOP); documentation and debugging techniques; understanding objects, properties, methods, and events; use of control structures, lists and arrays, and accessing a database. The class provides extensive hands-on experience on a Windows-based PC.

C. EXTENT AND NATURE OF TECHNOLOGY USE. (Optional but highly recommended for core courses)

Instructors must assign homework, exercises, and projects that involve design and implementation of business related application programs

VII. Information about Textbooks/Readings

Programming Languages for Business Problem Solving by Shouhong Wang, Hai Wang

ISBN 9781420062649

Published by Auerbach Publications

VIII. Instructional Policies Requirements

IX. Course Assessment and Grading (Optional but highly recommended for core courses)

A. DESCRIPTION OF ASSESSMENT.

Homework

Students will complete individual homework profiling their competence in various subject matters.

Quizzes and Exams

Students will complete quizzes (optional), mid-term exam (required; at least one), and final exam (required).

Projects

Instructors are strongly encouraged to assign comprehensive course project (individual or group) that requires problem solving and uses of the business programming language and/or database technologies to develop real-world business application systems.

B. GRADING POLICIES AND PROCEDURES.

In compliance with university policy: Final grades will be based on at least three, and preferably four or more, demonstrations of competence. In no case will the grade on any class tests count for more than one-third of the course grade.

X. Disabilities

XI. Assistive Technology

XII. Bibliography (Optional)

XIII. Consistency of SCO Standards across Sections

All future syllabi will conform to the SCO. The course coordinator should review the SCO and offer advice and/or materials to faculty member new to teaching the course. The course coordinator may offer or require regular review of instructors' course materials as well as anonymous samples of student work.

XIV. Additional Resources for Development of Syllabi

- ♦ University policy [Course Syllabi and Standard Course Outlines \(PS 11-07\)](#)
- ♦ Academic Technology (ATS) [Accessible Syllabus Template](#)
- ♦ Faculty Center for Professional Development (FCPD) [Sample Syllabus Template](#)