

# BUSINESS INFORMATION SYSTEMS (BIS)

## **BIS 290E Fundamentals of Information Systems (4 Credits)**

This online course provides an introduction to systems and development concepts, information technology, and application software. It explains how information is used in organizations and how IT enables improvement in quality, timeliness, and competitive advantage. Systems theory, quality, decision-making, and the organizational role of information systems are introduced. Information technology including computing and telecommunications systems are stressed. Concepts of organizations, information systems growth, and process improvement are introduced. The course may also be of interest to non-science majors who want a science-based elective. Offered as needed.

**Department:** Business, Management Leaders

**Pre-Requisites:** None

**Co-Requisites:** None

**Fees:** None

## **BIS 290X Fundamentals of Information Systems (4 Credits)**

This online course provides an introduction to systems and development concepts, information technology, and application software. It explains how information is used in organizations and how IT enables improvement in quality, timeliness, and competitive advantage. Systems theory, quality, decision-making, and the organizational role of information systems are introduced. Information technology including computing and telecommunications systems are stressed. Concepts of organizations, information systems growth, and process improvement are introduced. The course may also be of interest to non-science majors who want a science-based elective. Offered as needed.

**Department:** Business, Management Leaders

**Pre-Requisites:** None

**Co-Requisites:** None

**Fees:** None

## **BIS 300E Database Design & Development (4 Credits)**

This online course covers information systems design and implementation within a database management system environment. Students will demonstrate their mastery of the design process acquired in earlier courses by designing and constructing a physical system using database software to implement the logical design. Offered as needed.

**Department:** Business, Management Leaders

**Pre-Requisites:** BIS 290E.

**Co-Requisites:** None

**Fees:** None

## **BIS 300X Database Design & Development (4 Credits)**

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**Department:** Business, Management Leaders

**Pre-Requisites:** BIS 290X.

**Co-Requisites:** None

**Fees:** None

## **BIS 350E Computer Architecture (4 Credits)**

In this course, students will review the theoretical underpinnings, installation, and configuration of computer hardware and software through operational laboratory experiences. This course provides systems development personnel with hardware and software technology background, enabling them to evaluate computer architecture options and alternatives for effective use in a business environment. System architecture for networked computing systems and operating systems will also be covered. Offered as needed.

**Department:** Business, Management Leaders

**Pre-Requisites:** None

**Co-Requisites:** None

**Fees:** None

## **BIS 350X Computer Architecture (4 Credits)**

In this course, students will review the theoretical underpinnings, installation, and configuration of computer hardware and software through operational laboratory experiences. This course provides systems development personnel with hardware and software technology background, enabling them to evaluate computer architecture options and alternatives for effective use in a business environment. System architecture for networked computing systems and operating systems will also be covered. Offered as needed.

**Department:** Business, Management Leaders

**Pre-Requisites:** None

**Co-Requisites:** None

**Fees:** None

## **BIS 355E Information Systems Security: Policy and Procedure (4 Credits)**

This course explores the development of the policies and procedures needed to implement information security controls. Students will review, evaluate, and develop various types of policies, procedures, and security manuals, as well as assessing the security issues, trends, and resources most relevant for business today. Upon completion of the course, students will be able to create and defend an information security policy, identify processes to implement and enforce policy, and evaluate various security threats and risks. Students will also explore how information security must be integrated into all aspects of the business process. Tier 1- Tier- 3 policies will be discussed along with the mapping of the requirements for each. Offered as needed.

**Department:** Business, Management Leaders

**Pre-Requisites:** CIS 160E and BIS 250E.

**Co-Requisites:** None

**Fees:** None

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**Department:** Business, Management Leaders

**Pre-Requisites:** CIS 160X and BIS 250X.

**Co-Requisites:** None

**Fees:** None

**BIS 390E Comparative Programming Language (4 Credits)**

This course provides a study of several modern programming languages and the programming paradigm that each language strives to accommodate. Procedural, functional, logical, compiled, and interpretative programming languages are studied. For each language, the course will study data types, control structures, syntax and semantics, idiomatic constructs, translation into executable units, and the run-time environment. In some cases, the course will go behind the scenes to examine implementation of language elements. Students will develop a small program in each language discussed. An emphasis of the course will be to understand the design philosophy of each language and how that philosophy is exhibited in the elements of the language. Offered as needed.

**Department:** Business, Management Leaders

**Pre-Requisites:** BIS 350E and 360E.

**Co-Requisites:** None

**Fees:** 60

**BIS 400E Systems Analysis (4 Credits)**

This course examines the system development and modification process. It emphasizes the factors required for effective communication and integration with users and user systems while it promotes development of interpersonal skills between clients, users, team members, and others associated with development, operation, and maintenance of the system. Structured and object-oriented analysis and design, use of modeling tools, adherence to methodological life cycles, and project management standards are used to analyze and design information systems. Students will apply course content through group analysis and design of a departmental level system. Offered as needed.

**Department:** Business, Management Leaders

**Pre-Requisites:** None

**Co-Requisites:** None

**Fees:** None

**BIS 400X Systems Analysis (4 Credits)**

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**Department:** Business, Management Leaders

**Pre-Requisites:** None

**Co-Requisites:** None

**Fees:** None

**BIS 410E Distributed Systems Analysis (4 Credits)**

This course presents the physical design and implementation of information systems applications in emerging distributed computing environments using traditional and contemporary development methodologies. Students will use systems analysis concepts to analyze an information system in an emerging systems environment. Learning teams will use project management principles to analyze and recommend an information system. Offered as needed.

**Department:** Business, Management Leaders

**Pre-Requisites:** None

**Co-Requisites:** None

**Fees:** None

**BIS 410X Distributed Systems Analysis (4 Credits)**

This course presents the physical design and implementation of information systems applications in emerging distributed computing environments using traditional and contemporary development methodologies. Students will use systems analysis concepts to analyze an information system in an emerging systems environment. Learning teams will use project management principles to analyze and recommend an information system. Offered as needed.

**Department:** Business, Management Leaders

**Pre-Requisites:** None

**Co-Requisites:** None

**Fees:** None

**BIS 480E Project Management Capstone (4 Credits)**

This course covers the factors necessary for successful management of information systems development or enhancement projects. Both technical and behavioral aspects of project management are applied within the context of an information systems development project. Advanced IS majors operating as a high-performance team will engage in and complete the design and implementation of a significant information system. Project management, management of the IS function, and systems integration will be demonstrated and assessed in this project experience. Offered as needed.

**Department:** Business, Management Leaders

**Pre-Requisites:** None

**Co-Requisites:** None

**Fees:** None

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**BIS 480X Project Management Capstone (4 Credits)**

This course covers the factors necessary for successful management of information systems development or enhancement projects. Both technical and behavioral aspects of project management are applied within the context of an information systems development project. Advanced IS majors operating as a high-performance team will engage in and complete the design and implementation of a significant information system. Project management, management of the IS function, and systems integration will be demonstrated and assessed in this project experience. Offered as needed.

**Department:** Business, Management Leaders

**Pre-Requisites:** None

**Co-Requisites:** None

**Fees:** None