

# INFORMATION SYSTEMS

College of Business Administration

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**Administrative Support Coordinator:** Gordon Thompson

For MBA with Specialization in Information Systems, see Business Administration, Graduate Programs.

## Career Possibilities

Business Application Developers • Business Analysts • Database Designers • Web and E-Commerce Developers and Administrators • Webmasters • Wireless and Mobile Application Developers • Business Intelligence Analysts • Data Mining Specialists • Network and Security Specialists • Network Administrators • Social Media Specialists • Information Systems Consultants  
(For more information, see [www.careers.csulb.edu/](http://www.careers.csulb.edu/).)

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## Undergraduate Programs

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### Bachelor of Science in Business Administration

#### Admission Under Impaction

Refer to the following website for additional impaction criteria: [http://www.csulb.edu/depts/enrollment/admissions/impacted\\_major.html](http://www.csulb.edu/depts/enrollment/admissions/impacted_major.html).

#### Requirements

In order to graduate with a business degree from CSULB, a student must complete a minimum of 120 units. A majority of the upper division business courses, including economics and statistics, must be completed at this university. For details, refer to the CBA Policy on Course Transfers/Substitutions.

##### 1. Lower Division:

Take all of the following:

ACCT 201 Elementary Financial Accounting (3)  
Prerequisite: None

ACCT 202 Managerial Accounting (3)  
Prerequisites: ACCT 201

ECON 100 Principles of Macroeconomics (3)  
Prerequisites: MATH 103 or higher; one GE Foundation course.

ECON 101 Principles of Microeconomics (3)  
Prerequisite/Corequisite: MATH 103 or higher.

MATH 115 Calculus for Business (4)  
Prerequisite: Appropriate ELM score, ELM exemption, or MAPB 11.

Choose one of the following:

STAT 108 Statistics for Everyday Life (3)  
Prerequisite: None

MATH 114 Finite Mathematics (3)

Prerequisite: Appropriate ELM score, ELM exemption, or MAPB 11.

##### 2. Critical Thinking Requirements

Any critical thinking course (GE category A3); IS 100 is recommended.

##### 3. All business and pre-business majors shall demonstrate computer literacy and competency. Take one of the following:

A. Passing score (70%) on the Computer Proficiency Examination (CPE).

B. IS 233 Introduction to Computer Systems and Applications (3) with Credit (Cr).  
Prerequisite: None

C. Transfer equivalent course with a "C" or better grade.

##### 4. Upper Division:

A. Take all of the following:

CBA 300 International Business (3)  
Prerequisite: None

FIN 300 Business Finance (3)  
Prerequisite: None

BLAW 320 Legal and Regulatory Environment of Business (3)  
Prerequisite: None

IS 300 Management Information Systems (3)  
Prerequisite: IS 233 or equivalent.

IS 301 Business Communications (3)  
Prerequisite: None

IS 310 Business Statistics (3)  
Prerequisite: STAT 108 or MATH 114.

HRM 360 Organizational Behavior (3)  
Prerequisite: None

MGMT 300 Principles of Management (3)  
Prerequisite: None

MKTG 300 Marketing (3)  
Prerequisite: None

B. The following Capstone course must be taken at CSULB as a senior and after the upper-division prerequisite core courses have been completed (ACCT 310 or 202, FIN 300, MGMT 300, MKTG 300, IS 301):

MGMT 425 Business Strategy and Policy (3)  
Prerequisites: ACCT 310 or 320 or 202; MGMT 300, MKTG 300, FIN 300, IS 301.

C. Completion of option requirements.

5. Elective courses to total 120 units. Students are encouraged to select electives for expansion of knowledge and intellectual interests as well as for preparation for business employment.

### Option in Management Information Systems (120 units)

This option has an emphasis on systems management, information process and analysis, and new uses of information technologies and management information systems for business applications and decision-making. Also included are application development, e-commerce, business telecommunications, and decision technologies.

## Requirements

1. Take the following courses:
  - I S 340 Business Application Programming (3)  
Prerequisites: I S 300.
  - I S 380 Database Management (3)  
Prerequisite: I S 300.
  - I S 385 Systems Analysis and Design (3)  
Prerequisite: I S 300.
2. Take 9 units selected from the following:  
IS 320, 355, 445, 455, 456, 457, 464, 470, 480, 482, 483, 484, 485.

## Minor in Management Information Systems

### Requirements

1. Take the following course:  
IS 300 Management Information Systems (3)  
Prerequisite: IS 233 or equivalent.
2. Take 15 units selected from the following:  
IS 320, 340, 355, 380, 385, 445, 455, 456, 464, 470, 480, 483, 484, and 485.

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## Information Systems Courses (I S)

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### LOWER DIVISION

#### 100. Critical Thinking and Information Technology Literacy (3)

Critical thinking and information literacy skills through information needs assessment, information gathering, diagnosis, synthesis, deductive and inductive reasoning, and reporting and presentation using information technologies.

Letter grade only (A-F).

#### 233. Introduction to Computer Systems and Applications (3)

Introduction to using Internet and e-mail, Windows, word processing, spreadsheet, and database applications; basic computer literacy.

Credit/No Credit grading only.

### UPPER DIVISION

#### 300. Management Information Systems (3)

Prerequisite: IS 233 or equivalent.

Information systems concepts and components, contemporary organizational applications, development and management of information systems, and future trends. Computer-based team projects requiring integration and application of conceptual and skills-oriented information systems knowledge in business environment.

Letter grade only (A-F).

#### 301. Business Communications (3)

Analysis of principles of collecting, organizing, analyzing, and presenting business information. Written and oral communications involving problem solving in the business management process.

Letter grade only (A-F).

#### 301L. Business Communication Writing (3)

Prerequisite: Consent of instructor.

A writing intensive course format emphasizing concepts and practice for development of writing skills necessary for successful professional practice. This course may be used to satisfy the GVAR requirement.

May be repeated to a maximum of 4 units in different semesters. May be used to satisfy the GVAR.

#### 310. Business Statistics I (3)

Prerequisite: STAT 108 or MATH 114.

Application of statistics to business problems. Data collection and organization, probability theory, measures of central tendency and dispersion, hypothesis testing and estimation, simple regression, and correlation. Use of statistical software.

Letter grade only (A-F)

#### 320. Quantitative Analysis for Business Decisions (3)

Prerequisite: MATH 114.

Application of quantitative analysis and computer software for solving business problems. Linear programming, integer programming, PERT and CPM, inventory control, queuing models, quality control, number basis, transportation and assignment models, and simulation. Use of computer software.

Letter grade only (A-F).

#### 340. Business Application Programming (3)

Prerequisites: I S 300.

Object-oriented programming (OOP). Labels, buttons and text boxes, menus, dialog boxes and multiple forms, arrays, and drag-and-drop functions. Accessing database files. Concepts ranging from simple to advanced. Visual programming systems.

Letter grade only (A-F).

#### 355. Introduction to Business Telecommunications (3)

Prerequisite: I S 300.

Introduction to concepts and technology of telecommunications and networking in business and organizations. Basics of voice, data, image, and video transmission. Fundamentals of networking, use of Internet technology and telecommunication regulation and standards.

Letter grade only (A-F).

#### 380. Database Management (3)

Prerequisite: I S 300.

Introduction to database requirements, analysis and specification. SQL query formulation. Database implementation using relational database management system software, such as Oracle. Design of computerized business forms and reports.

Letter grade only (A-F).

#### 385. Systems Analysis and Design (3)

Prerequisite: I S 300.

Introduction to current and emerging practices, concepts and methods of systems analysis and design. Development process models, requirements analysis and system modeling, conceptual and physical design, systems implementation and maintenance, project management and teamwork, roles and responsibilities of systems analysts.

Letter grade only (A-F).

#### 410. Business Statistics II (3)

Prerequisites: IS 310 and 301.

A second course in business statistics. Sampling distributions, estimation, hypothesis testing, analysis of variance, linear regression and correlation analyses, multiple regression, non-parametric techniques, one-way and two-way analysis of variance, and time series forecasting. Use of appropriate software and spreadsheet modeling.

Letter grade only (A-F)

#### 445./545. Internet Applications Development (3)

Prerequisites: IS 301, IS 340.

Design, management, and applications of Internet-based electronic business transaction systems. Special emphasis on Web home page design and database-driven Web application development.

Letter grade only (A-F). Lecture, hands-on software project and case studies.

### **455. Local Area Networks (3)**

Prerequisites: IS 301, 355.

Technology and system development of local area networks. Network requirement analysis, design, implementation, and operation from user and network administrator perspectives. Network server management, wide area network and Internet connectivity, and network security and control.

Letter grade only (A-F).

### **456. Systems Integration and Security (3)**

Prerequisites: IS 301, 355.

Technology, application, operating system, infrastructure, and systems integration in internetworking and enterprise networking. Interoperability, mobile system, multimedia, distributed and collaborative systems, network management, fault tolerance, security and middleware. Case studies and hands-on activities.

Letter grade only (A-F).

### **457. Wireless Systems and Mobile Applications (3)**

Prerequisites: IS 301, 340.

Application of information technologies, management in wireless and mobile environment. Technical aspects of wireless internetworking and mobile applications in business. Pervasive and ubiquitous computing environment and applications. Current technical issues, application development, and human interface design.

Letter grade only (A-F).

### **464./564. Network Modeling and Simulation (3)**

Prerequisites: IS 301, 310.

Fundamentals of simulation methodology for performance and feasibility study of business models. Basic probability distributions, random number generation, model formulation, evaluating results, validations, waiting-line simulation, and computer network performance measurement via simulation and use of computer software simulation packages.

Letter grade only (A-F).

### **470. Business Intelligence (3)**

Prerequisites: IS 301, 310.

Extract useful information (business intelligence BI) from large volumes of data or internet using BI software. Theories and applications in business intelligence, data mining, and business analytics. Topics include recommender system, collaborative filtering, classification, clustering, web mining, social network analysis.

Letter grade only (A-F).

### **480. Advanced Database Management (3)**

Prerequisites: IS 301, 380.

Advanced approaches such as object-oriented, data warehousing, and client/server methods to database applications and development. Use of entity-relationship analysis to identify objects. Development of relational database systems for a business. Application software development project using cutting-edge database technology.

Letter grade only (A-F).

### **482. Enterprise Systems (3)**

Prerequisites: IS 301, IS 340, IS 380.

Introduction to theories and application of enterprise systems. Issues and management of enterprise systems adoption. Understanding and hands-on experience of major business processes in enterprise systems. Enterprise systems configuration and customization with back-end programming language.

Letter grade only (A-F).

### **483. Business Applications Using Java (3)**

Prerequisites: IS 300, 301.

Development of business application using Java language. Tools and technologies including data types, program control,

objects, classes and relationship, class inheritance, interfaces, polymorphism, inner classes, the relationship between super-classes and sub-classes, event-driven programming and socket-bases communication in Java.

Letter grade only (A-F).

### **484./584. Electronic Commerce (3)**

Prerequisites: IS 300, 301.

Theory and applications of electronic commerce including issues such as E-cash, E-banking, E-tailing, SCM, E-marketing, B2C, B2B, C2C, E-government, Internet business opportunities, Internet security homepage maintenance, Internet database interface and cooperative computing.

Letter grade only (A-F).

### **485. Information Systems Project (3)**

Prerequisites: IS 301, 380.

A comprehensive systems project of moderate complexity for a client-server environment using a team approach for requirements analysis, system design, and prototype creation. Project planning and management techniques.

Letter grade only (A-F).

### **495. Selected Topics in Information Systems (1-3)**

Prerequisites: Consent of instructor and GPA of 3.0 or higher in major, IS 301.

Topics of current interest in the field.

May be repeated to a maximum of 6 units with different topics. Topics announced in the *Schedule of Classes*.

### **497. Directed Studies (1-3)**

Prerequisites: Consent of instructor and department chair; student must be on Dean's List with a GPA of 3.0 or higher in Management Information Systems.

Individual projects, research, or study in the option.