Modesto Junior College
Course Outline of Record

CMPSC 202

I. **OVERVIEW**
The following information will appear in the 2010 - 2011 catalog

**CMPSC 202 Business Information Systems** 3 Units

**Prerequisite:** Satisfactory completion of CMPSC 201 and BUSAD 201 or BUSAD 310.

Introduction to design, development, and use of information system models to improve managerial decision making. Study of information systems hardware and software; advanced computer codes; systems analysis and planning; systems security; application development using decision support systems; and expert systems. Lab work will focus on Internet research and advanced spreadsheet, database, and word processor functions for solutions to business problems.

Field trips might be required. (A-F or P/NP - Student choice) Lecture /Lab

**Transfer:** (CSU, UC)

II. **LEARNING CONTEXT**
Given the following learning context, the student who satisfactorily completes this course should be able to achieve the goals specified in Section III, Desired Learning:

A. **COURSE CONTENT**

1. **Required Content:**

   a. Introduction to business information systems (BIS)
      i. Data, information, and systems.
      ii. Data manipulation.
      iii. Data verification.

   b. Strategic uses of BIS.
      i. Achieving a competitive advantage.
      ii. Reducing costs.
      iii. Creating and enhancing products and services.

   c. Hardware technology in BIS.
      i. Mass storage devices.
      ii. Business data input/output devices.
      iii. Encoding schemes.
      iv. Imaging and voice recognition devices.
      v. Considerations in purchasing business computer hardware.
d. Software technology in BIS.
   i. Programming languages.
   ii. Application software.
   iii. Liability for software defects.
   iv. Operating systems
   v. Considerations in purchasing business computer software.

e. Telecommunication and networks in BIS.
   i. Communications directions.
   ii. Synchronization vs. asynchronization.
   iii. Channels and media.
   v. Networks: LANS vs. WANS.
   vi. Network topologies.
   viii. FAX, voice mail, cellular phones, and teleconferencing.
   ix. Security issues.

f. The Internet and Intranets in BIS.
   i. Commercial online services.
   ii. World Wide Web.
   iii. Browsers.
   iv. Risks and security.

g. Data management in BIS.
   i. Traditional data management.
   ii. Database models.
   iii. Components of a DBMS.
   iv. Relational operations and structured query languages.
   v. Database architecture: distributed and client/server systems.

h. Managers and their information needs in BIS.
   i. The organizational pyramid.
   ii. Characteristics of data at different managerial levels.
   iii. Ethics of using stored data.
iv. The nature of managerial work: planning, control, and decision-making.

v. Tabular and graphical presentation of data results.

vi. Transaction processing systems.

vii. Decision support systems.

viii. Executive information systems.

ix. Information politics.

i. Organization of information systems and services.
   i. Centralized, decentralized, and distributed BIS architecture.
   ii. Challenges for BIS managers and line managers.
   iii. Chargeback methods of costing BIS.

j. Information systems in business functions.
   i. Accounting.
   ii. Finance.
   iii. Manufacturing and inventory control.
   iv. Marketing and sales.
   v. Human resources.

k. Inter-organizational and international BIS.
   i. Sharing information systems.
   ii. Vertical vs. horizontal information interchange.
   iii. Electronic data interchange.
   iv. International and multinational organizations.

l. Decision support and executive information systems.
   i. The decision making process.
   ii. Structured and unstructured problems.
   iii. Decision supports systems components.
   iv. Developing decision support systems.

m. Artificial intelligence and expert systems.
   i. Robotics, artificial vision, neural networks, and fuzzy logic.
   ii. Development of expert systems.
   iii. Limitation of expert systems.
n. Planning and information systems.
   i. Top-down planning.
   ii. Bottom-up planning.
   iii. Critical success factors.

o. Systems development.
   i. Systems development life cycle.
   ii. Prototyping.
   iii. Computer-aided software engineering.
   iv. Project integration.
   v. Systems integration.

p. Alternatives for systems acquisition.
   i. Outsourcing.
   ii. The information systems subsidiary.
   iii. Purchased applications.
   iv. User application development.

q. Controls and security measures.
   i. Goals of information security.
   ii. Risks to security.
   iii. Access and data entry controls.
   iv. Recovery measures.
   v. The economics aspects of security measures.

2. **Required Lab Content:**

   In lab, students perform the functions listed in the lecture content section. Assignments are given that require application of the content.

   a. The Internet and Intranets in BIS.
      i. Commercial online services.
      ii. World Wide Web.
      iii. Browsers.
      iv. Risks and security.
b. Data management in BIS.
   i. Traditional data management.
   ii. Database models.
   iii. Components of a DBMS.
   iv. Relational operations and structured query languages.
   v. Database architecture: distributed and client/server systems.

c. Managers and their information needs in BIS.
   i. The organizational pyramid.
   ii. Characteristics of data at different managerial levels.
   iii. Ethics of using stored data.
   iv. The nature of managerial work: planning, control, and decision-making.
   v. Tabular and graphical presentation of data results.
   vi. Transaction processing systems.
   vii. Decision support systems.
   viii. Executive information systems.
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   ii. Challenges for BIS managers and line managers.
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   i. Accounting.
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f. Inter-organizational and international BIS.
   i. Sharing information systems.
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g. Decision support and executive information systems.
   i. The decision making process.
   ii. Structured and unstructured problems.
   iii. Decision supports systems components.
   iv. Developing decision support systems.

B. ENROLLMENT RESTRICTIONS

1. Prerequisites

Satisfactory completion of CMPSC 201 and BUSAD 201 or BUSAD 310.

2. Requisite Skills

Before entering the course, the student will be able to:

a. Use introductory accounting/bookkeeping functions.
   i. Journalizing.
   ii. Posting of debits and credits.
   iii. Accounts receivable/payables.
   iv. Purchase requests, purchase orders, inventory control.
   v. Sales and expenses.
   vi. Payroll functions.
   vii. Income statements.

b. Use introductory computer functions.
   i. Microcomputer and its components.
   ii. Operating system.
   iii. General application software.
   iv. Word processor, spreadsheet, database.
   v. Internet.
   vi. Binary code system of the microcomputer.

C. HOURS AND UNITS

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3 Units

D. METHODS OF INSTRUCTION (TYPICAL)

Instructors of the course might conduct the course using the following method:

1. Lecture/discussion methods.

2. Group projects are assigned to allow the students to experience group dynamics as well as to give experience in analyzing, designing, and presenting a business systems project.

3. Outside lab work involving the use of a library and internet research.
4. Creating word processing documents, spreadsheets and databases.

5. Working in class groups, students will compare and contrast various business computer systems for their appropriate application.

E. ASSIGNMENTS (TYPICAL)

1. **EVIDENCE OF APPROPRIATE WORKLOAD FOR COURSE UNITS**
   
   *Time spent on coursework in addition to hours of instruction (lecture hours)*
   
   - Weekly assignments working with every major software category at least once as an individual assignment and later again as a group assignment.
   - At least three major group assignments should be given each term.
   - Reading assignments should be on a textbook chapter basis, approximately one chapter and one chapter quiz per week. (Done online or at home as homework).

2. **EVIDENCE OF CRITICAL THINKING**
   
   *Assignments require the appropriate level of critical thinking*

   **Group Project 3: Instructions**

   **Company Project 3: Movie Tie-ins Project**

   **Introduction:** Much of the money made by movies these days actually comes from "ancillary products" which are things like shirts, action figures, etc. Your job is to research and price a set of products for your movie.

   **Project Elements:**

   A) Create a spreadsheet that will show your project budget. You need to research real numbers for the products. Your budget total is $20,000,000.

   B) Create a database using MS Access that contains data on all your ancillary products. There should be a table defining unit prices, costs of production per unit and has a link to another table that holds the addresses of the supply companies. Create reports for each table.

   C) Research the cost of doing a deck of collectible cards for the movie. These cards will depict characters from your movie.

   D) Find out about making action figures for toy stores. How much do other companies sell them for?

   E) Create a PowerPoint presentation that takes about 5-10 minutes to go thru. This should use charts made from your spreadsheets.

   F) Create a website selling your Movie, it should have a gallery of the cast with invented characters they will play in the film.

   G) Find and print out proof that a .com site with a similar name to your movie title is unregistered.

   **Test Question:** __________ registered U.S. Patent Number 6,865,546, titled "Methods and systems of assisting users in purchasing items," a software developed by the company.

F. **TEXTS AND OTHER READINGS (TYPICAL)**

III. DESIRED LEARNING

A. COURSE GOAL
As a result of satisfactory completion of this course, the student should be prepared to:

work in a modern computer-assisted business management environment. The course is focused on concepts and some skill-building in the cooperative usage and development of computerized information systems. Curricunet is an example of such a system, and working with some form of information system is a requirement of most skilled-labor jobs today.

B. STUDENT LEARNING GOALS
Mastery of the following learning goals will enable the student to achieve the overall course goal.

1. Required Learning Goals
Upon satisfactory completion of this course, the student will be able to:

a. Describe how to set up a business computer system for transaction processing, management information systems, and shared data resources.
b. State what is new on the business technological horizon.
c. Analyze different business computer systems and apply the correct systems to a given business situation.
d. Describe different database models and their advantages/disadvantages.
e. Identify the general formats of databases such as fields, records, and files.
f. Apply the best input and output procedures for business data processing.
g. Describe an organizational pyramid structure of a business organization.
h. Compare hierarchical, network, and relational database structures.
i. Describe the components of a database management system.
j. Describe the characteristics of information at different managerial levels.
k. Describe the different organizations of the information system.
l. Demonstrate information systems in the accounting, finance, manufacturing, marketing, and human resource functions of a business.

2. Lab Learning Goals
Upon satisfactory completion of the lab portion of this course, the student will be able to:

a. Create an advanced spreadsheet to aid in business decision-making.
b. Demonstrate advanced database design to create a business informational resource.
c. Use the internet as a research resource for locating suppliers.
d. Create a powerpoint presentation and deliver it to the class.
e. Create a webpage and submit it to search engines for listing.

IV. METHODS OF ASSESSMENT (TYPICAL)
A. FORMATIVE ASSESSMENT

1. Computer Lab Work – The students are evaluated on: Several computer labs involving word processing, spreadsheets, and databases.

2. Group projects dealing with problem analysis, solution design, and implementation of business situations.

3. Short objective quizzes are given about every two weeks to check the students’ progress.

B. SUMMATIVE ASSESSMENT

1. At least three major exams during the semester, each using objective and essay questions, and at least one business situation analysis question.

2. A comprehensive final examination.