Discipline: Computer Information Systems

Originator: Catherine Brotherton

RIVERSIDE COMMUNITY COLLEGE DISTRICT
INTEGRATED COURSE OUTLINE OF RECORD

COMPUTER INFORMATION SYSTEMS 1A

CIS-1A : Introduction to Computer Information Systems

College: RIV
Lecture Hours: 54.000
Lab Hours: 18.000
Units: 3.00
Letter Grade

Course Description

Prerequisite: None

Course Credit Recommendation: Degree Credit

Examination of information systems and their role in business. Focus on information systems, database management systems, networking, e-commerce, ethics and security, computer systems hardware and software components. Application of these concepts and methods through hands-on projects developing computer-based solutions to business problems. Utilizing a systems approach students will use databases, spreadsheets, word processors, presentation graphics, and the Internet to solve business problems and communicate solutions. 54 hours lecture and 18 hours laboratory. (TBA option)

Short Description for Class Schedule

An introduction to computer concepts and theory, information systems, and computer applications. The development of computer based solutions to business problems using word processors, spreadsheets, databases, presentation graphics, and the Internet.

Entrance Skills:

Before entering the course, students should be able to demonstrate the following skills:

Student Learning Outcomes:

Upon successful completion of the course, students should be able to demonstrate the following skills:

1. **Identify the fundamental computer concepts and terminology used for input, processing, output, and storage.**
    - **Information Competency & Technology Literacy:** Students will be able to use technology to locate, organize, and evaluate information. They will be able to locate relevant information, judge the reliability of sources, and evaluate the evidence contained in those sources as they construct arguments, make decisions, and solve problems.
2. **Describe existing and emerging technologies and their impact on organizations and society.**
    - **Information Competency & Technology Literacy:** Students will be able to use technology to locate, organize, and evaluate information. They will be able to locate relevant information, judge the reliability of sources, and evaluate the evidence contained in those sources as they construct arguments, make decisions, and solve problems.
    - **Critical Thinking:** Students will be able to demonstrate higher-order thinking skills about issues, problems, and explanations for which multiple solutions are possible. Students will be able to explore problems and, where possible, solve them. Students will be able to develop, test, and evaluate rival hypotheses. Students will be able to construct sound arguments and evaluate the arguments of others.
3. **Solve common business problems using appropriate Information Technology applications and systems, such as word processors, spreadsheets, databases, presentation graphics, and the Internet.**
    - **Critical Thinking:** Students will be able to demonstrate higher-order thinking skills about issues, problems, and explanations for which multiple solutions are possible. Students will be able to explore problems and, where possible, solve them. Students will be able to develop, test, and evaluate rival hypotheses. Students will be able to construct sound arguments and evaluate the arguments of others.
    - **Communication Skills:** Students will be able to communicate effectively in diverse situations. They will be able to create, express, and interpret meaning in oral, visual, and written forms. They will also be able to demonstrate quantitative literacy and the ability to use graphical, symbolic, and

numerical methods to analyze, organize, and interpret data.

- **Information Competency & Technology Literacy:** Students will be able to use technology to locate, organize, and evaluate information. They will be able to locate relevant information, judge the reliability of sources, and evaluate the evidence contained in those sources as they construct arguments, make decisions, and solve problems.

4. **Demonstrate an understanding of the development and use of information systems in business.**
   - **Information Competency & Technology Literacy:** Students will be able to use technology to locate, organize, and evaluate information. They will be able to locate relevant information, judge the reliability of sources, and evaluate the evidence contained in those sources as they construct arguments, make decisions, and solve problems.
5. **Demonstrate the principles of Internet research.**
   - **Critical Thinking:** Students will be able to demonstrate higher-order thinking skills about issues, problems, and explanations for which multiple solutions are possible. Students will be able to explore problems and, where possible, solve them. Students will be able to develop, test, and evaluate rival hypotheses. Students will be able to construct sound arguments and evaluate the arguments of others.
   - **Information Competency & Technology Literacy:** Students will be able to use technology to locate, organize, and evaluate information. They will be able to locate relevant information, judge the reliability of sources, and evaluate the evidence contained in those sources as they construct arguments, make decisions, and solve problems.
6. **Understand the principles of computer security, ethics and privacy.**
   - **Information Competency & Technology Literacy:** Students will be able to use technology to locate, organize, and evaluate information. They will be able to locate relevant information, judge the reliability of sources, and evaluate the evidence contained in those sources as they construct arguments, make decisions, and solve problems.
   - **Self-Development & Global Awareness:** Students will be able to develop goals and devise strategies for personal development and well-being. They will be able to demonstrate an understanding of what it means to be an ethical human being and an effective citizen in their awareness of diversity and various cultural viewpoints.

Course Content:

1. Information systems concepts
   a. Hardware and Software
   b. Input, Processing, Storage, and Output
2. Communication and network concepts, systems, and applications
   a. Wired and Wireless Communication media
   b. Network topologies
   c. Network Applications
3. Internet usage; e-business systems
   a. History of Internet and World Wide Web
   b. How the Internet works
   c. Social Networking
   d. Cloud computing
   e. E-commerce
4. System infrastructure concepts
   a. CPU, instruction cycle
   b. Memory
   c. Storage
5. System and Application software programs and concepts
   a. Operating Systems and Features
   b. Utility Programs
   c. Types of Application Software
6. Information systems security, crime, and ethics
   a. Viruses, worms, malware, spyware
   b. Security software, firewalls, anti-virus, encryption
   c. Identity theft, hacking
   d. Privacy, code of ethics
7. Types of information systems and their roles in business
   a. Transaction Processing Systems
   b. Management Information Systems
   c. Decision Support Systems
   d. Expert Systems
8. Systems development life cycle
   a. Planning, feasibility

b. Analysis, requirements
c. Design
d. Implementation, testing
e. Maintenance

9. Organization and management of structured and unstructured data using spreadsheets and database tools
    a. List management
    b. Relational databases
10. Practical solutions to business problems using various tools.
    a. electronic spreadsheets
    b. databases
    c. Internet technologies
    d. word processors
    e. presentation graphics
    f. conducting internet research including searching, downloading, uploading, managing files and folders

TBA Lab Content

1. Computer and Computer Information Systems Concepts
    a. Review concepts taught
    b. Laboratory activities designed to augment lecture and class activities
2. Applications and operating system
    a. Operating Systems and Utility Programs
        i. Activities designed to increase student knowledge of the operating system
    b. Practical exercises designed to facilitate and demonstrate the acquisition of skills required to perform internet research, create documents, spreadsheets, databases, and presentations that solve common business problems.
    c. Review core concepts for each application presented during the course:
        i. Word processing, such as Word
        ii. Spreadsheets, such as Excel
        iii. Databases, such as Access
        iv. Presentation Graphics, such as PowerPoint

Methods of Instruction:

Methods of instruction used to achieve student learning outcomes may include, but are not limited to, the following activities:

- Class lectures/discussions/demonstrations in order to clarify the concepts, show and explain computer literacy topics and how these topics apply to society.
- Class lectures/discussions/demonstrations that model and explain effective use of computer applications.
- Quizzes designed to motivate and facilitate the acquisition of computer literacy.
- Online and Laboratory activities and application assignments to address areas of improvement in computer literacy and application skills.
- Projects designed to facilitate and demonstrate the acquisition of skills required to create documents, spreadsheets, databases and presentations.
- Collaborative projects/cooperative learning tasks that encourage students to develop and apply computer literacy and application skills.

Methods of Evaluation:

Students will be evaluated for progress in and/or mastery of student learning outcomes using methods of evaluation which may include, but are not limited to, the following activities:

- Quizzes/examinations designed to measure students' degree of mastery of computer literacy.
- Exercises/projects designed to demonstrate the acquisition of computer concepts and application skills.
- Oral reports/examinations designed to measure students' critical thinking, comprehension, and organizational skills.
- Collaborative projects designed to evaluate students' ability to work together to address a given task.
- Computer Laboratory assignments/projects designed to clarify students' individual computer literacy strengths and areas of improvement related to computer application skills.
- Final examination designed to evaluate students' overall achievement of course objectives in computer literacy concepts and application skills.

Sample Assignments:

Outside-of-Class Reading Assignments

- Read and understand computer concepts and theory
- Read and understand the function/use of the following:
    - The Internet
    - Application software
    - System software
    - Hardware
    - Networks and Security
    - Information Systems
    - Computer applications within society

Outside-of-Class Writing Assignments

- Typical writing assignments include the following:
    - Development of presentation graphics
    - MLA formatted papers
    - A project that requires an MLA formatted paper and a slide presentation of key points.
- Quizzes/tests performed outside of class using testing software which requires interpretation of complex questions, assimilating data to reach a correct answer.

Other Outside-of-Class Assignments

- There are multiple assignments (3) for each application software package such as three assignments of increasing complexity for Microsoft Excel.
- There are typically 10 chapters from the concepts book that cover all aspects of computer operational theory. These chapters all have requisite testing at the completion of each chapter. The testing uses secondary web sites which are undertaken outside of class.
- There is also a project that utilizes three of the software packages to develop a MLA formatted paper from Internet research that is summarized in a presentation in PowerPoint.

Course Materials:

All materials used in this course will be periodically reviewed to ensure that they are appropriate for college level instruction. Possible texts include the following:

Evans, Alan et al. *Technology In Action, Complete Version.* 12th Prentice Hall, 2015.
Gaskin, Shelley et al. *GO! with Microsoft Office 2013 Volume 1.* 1st Pearson Education, 2014.
MyItLab. Software. 1. Pearson Education, MyItLab training and testing software tied to the GO! with Microsoft Office series book..

Codes/Dates:

CB05 MOV Transfer Status: Transfers to Both UC/CSU (A)
CB05 NOR Transfer Status: Transfers to Both UC/CSU (A)
CB05 RIV Transfer Status: Transfers to Both UC/CSU (A)
C-ID#: ITIS 120

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