

COURSE OUTLINE

Computer Science/ Information Systems 101 (C-ID Number: ITIS120, BUS140) Introduction to Computer and Information Systems (C-ID Title: Business Information Systems, Computer Information Systems)

Catalog Statement

CS/IS 101 is designed to present the concepts and technology of processing information to students who plan to continue their studies in business information systems or computer science or who plan to work in the field. This course has a hands-on component in which the student learns basic system and application software, Web site development, Internet, and networking. Information competency skills are introduced. Students will focus on the application of concepts and methods through hands-on projects, developing computer-based solutions to business problems.

Total Lecture Units: 5.0

Total Laboratory Units: 0.0

Total Course Units: 5.0

Total Lecture Hours: 80.0

Total Laboratory Hours: 0.0

Total Laboratory Hours To Be Arranged: 0.0

Total Faculty Contact Hours: 80.0

Recommended preparation: Eligibility for ENGL 120, BUSAD 106, or ESL 151

Course Entry Expectations

Prior to enrolling in the course, the student should be able to:

- read and critically analyze various academic readings;
- evaluate and select information from expository sources to support opinions, conclusions, or recommendations included in original essays and reports;
- summarize, analyze, and synthesize information, express and apply standards for judgment, compare and contrast, and evaluate evidence in order to form and state reasoned opinions.

Course Exit Standards

Upon successful completion of the required coursework, the student will be able to:

- explain the concept of a network; identify hardware and software needed to create a network; compare and contrast wired vs. wireless networks; describe network security issues;
- describe the Internet and Internet services; describe the evolution of e-business and understand how to do business on the Internet; identify Web development tool and authoring systems; create a simple Web page using Hypertext Markup Language (HTML), explain organizational implications of the pervasiveness of the Internet;
- demonstrate the importance of the technology infrastructure in an organization; identify major hardware components of a computer system; explain how to evaluate hardware components and what to look for in acquiring computer hardware; understand the interdependence of hardware and software; compare open vs. proprietary platforms;
- describe distinctions between system software and application software; explain common functions of system software; identify types of application software; understand how to evaluate software when planning a system; compare open vs. proprietary software;
- describe ethical concerns associated with information systems including privacy, access, reliability, legal, ethical, and accuracy; identify types of computer crime; select, access, and use appropriate sources;
- use a spreadsheet software package to solve common business problems; demonstrate effective spreadsheet design through correct usage of formulas and functions including absolute vs. relative cell addressing; use financial, logical, date and statistical functions; use lists and data management functions; create appropriate charts and printed reports; work with multiple worksheets;
- use a database software package to solve common business problems; design and build a database (define fields and properties, enter records); design and build simple forms, queries and reports.

Course Content

Total Faculty Contact Hours = 80.0

Overview **(2 hours)**

Hardware **(6 hours)**

Input and output

Processing and storage

Digital representation of data

System configuration, security and troubleshooting

Application Software Integration and Information Competency

Locating and evaluating information using search engines and online databases

applications **(10 hours)**

Search Engines: strategy, advanced searching techniques, evaluating sources, intellectual property, plagiarism, and citing sources

Online Databases: Visible versus invisible Web

Capturing, and formatting information using text editors and spreadsheet applications **(12 hours)**

Text Editor: Manipulate data into appropriate format

Spreadsheet: Import data set for analysis

Analyzing and organizing information using spreadsheets and databases applications **(10 hours)**

- Spreadsheet: translating data into information, preparation for export to a database
- Database: structuring data for access, updating and reporting
- Sharing and publishing information using cloud storage, presentation and Web site development applications (**10 hours**)
 - Cloud Storage: tools, services, access, security, and privacy
 - Presentation: tools, formats, and access
 - Web Site Development: tools, formats, access, and limitations
- Programming Languages (**6 hours**)
 - Categories
 - Program development life cycle
 - Introduction to programming with HTML and JavaScript
- Communications and Networks (**4 hours**)
- Internet and World Wide Web (**6 hours**)
- Databases (**4 hours**)
 - Data hierarchy
 - Data models
 - Database administration
 - Web databases
- Information Systems Analysis and Design (**4 hours**)
- E-commerce (**4 hours**)
 - Business strategies
 - Technologies
 - Integration with conventional business
- Computers and Society (**2 hours**)
 - Security
 - Ethics
 - Privacy
 - Careers

Methods of Instruction

The following methods of instruction may be used in the course:

- lecture/demonstration;
- interactive discussion;
- hands-on activities and exercises;
- online activity based projects.

Out of Class Assignments

The following out of class assignments may be used in the course:

- written and hands-on computer activities (e.g. Internet searches for business);
- lab assignments (e.g. databases, spreadsheets, slide presentations);
- research projects (researching recent technology changes in e-commerce).

Methods of Evaluation

The following methods of evaluation may be used in the course:

- quizzes;
- midterm examinations;
- final examination.

Textbook(s)

Bourgeois, David. *Information Systems for Business and Beyond*. Open Textbook Challenge by Saylor Academy, 2014. PDF file.

10th Grade Textbook Reading Level.

O'Leary, T. *Computing Essentials 2015 Introductory & Microsoft Office 2013*. 1st ed. Boston: McGraw-Hill Publishing, 2014. Print.

10th Grade Textbook Reading Level. ISBN: 9781259345500

Student Learning Outcomes

Upon successful completion of the required coursework, the student will be able to:

- explain all the components of a network including hardware and software needed to create a network;
- describe the Internet and services available on the internet;
- describe the evolution of e-business and understand the modern business uses of the internet;
- describe the importance of the technology infrastructure in an organization and how rapid changes in technology affect the organization;
- identify major hardware components of a computer system;
- describe distinctions between system software and application software;
- describe ethical, legal and privacy concerns associated with information systems;
- solve common business problems with the use of spreadsheet and database software packages.