

Information Technology

Course Number: 667

Grade Levels: 9 through 12

Teacher: Marx Reynoso

Level of Course: Elective

Number of credits: 5

Purpose of Course:

To acquaint students with the capabilities and limitations of different types of digital computers in a business environment. To provide experience in using a microcomputer as a productivity tool in a business environment. To provide practice in operating system utilization on microcomputers. To develop competencies in using business application software and productivity tools. To provide experience in using digital resources to locate information. To introduce students to the concept of information literacy. To introduce students to problem solving using a computer. Students are provided hands-on experience and an introduction to the computer operating system in a PC environment. Windows and popular software packages for word processing, spreadsheet development, presentations and Internet concepts are also introduced. This course also provides the student with a functional understanding of general Networking theory and essential concepts. The student will gain hands-on implementation experience setting up a typical Network (LAN) using simple Network architecture. Conceptual topics will include: Basic Network concepts, Network media, Network communications and protocols.

This High School curriculum and instructions are aligned to the State's Core Curriculum Content Standards. The school addresses the elimination of discrimination by narrowing the achievement gap, by providing equity in educational programs and by providing opportunities for students to interact positively with others regardless of race, creed, color, national origin, ancestry, age, marital status, affection or sexual orientation, gender, religion, disability or socioeconomic status.

General Objectives:

The goal of an Information Technology course is comparable to those in the introductory sequence of courses for Information Technology majors offered in college and university Computer Information Systems departments. This course is intended to serve both as an introductory course for computer information systems majors and a course for students who will major in other disciplines that require significant involvement with technology.

At the conclusion of this course, the students will be able to:

1. Identify capabilities, limitations and procedures for using computer systems to solve business problems.
2. Discuss the role of computers in society and business.
3. Use digital resources to gather information.
4. Use a microcomputer operating system.
5. Apply concepts of word processing and document design.
6. Apply concepts of electronic spreadsheet design.
7. Describe how business has been revolutionized by the use of computers.

8. Describe the purpose of computer networks
9. Identify key concepts in computer networking
10. Identify critical components used to create networks
11. Use networking components and networking media to create a network
12. Describe how world communications have changed through the use of computer networks.

GENERAL CONTENT AREAS

General Computer Units

- Course introduction
- Computer history highlights
- System components
- Input/Output
- Storage
- Computers in society (privacy, security, ethics, professions)

Microcomputer Operating Systems

- System startup (boot) process
- Graphical environment
- Command line environment
- File types, names, and path information
- File management
- Disk organization
- Executing application software
- Utility programs

Network Environments

- Data communication principles and equipment
- Using local and wide area networks
- Using e-mail
- Accessing digital resources
- Downloading information from the Internet

Materials/Resources

Text:

1. Discovering Computers 2008: Introductory – by Shelly, Cashman and Vermaat.
2. Discovering Computers 2008 Study guide
3. Guide to Networking Essentials – by Greg Tomsho. 4th Edition.

Video:

1. “The Pirates of Silicon Valley”- 1999 - TNT Produced
2. “Downloaded: The True Story of the Internet”- 2008 - The Discovery Channel Produced
3. “The Minority Report” – 2002 - Rated PG-13 for violence, brief language, some sexuality and drug content.

Assessment:

Observation along with completion of class assignments, written tests and quizzes, and presentations to the class are some of the assessment methods that will be utilized. The primary purpose of assessment is to assist the students in the learning process. The teacher selects the most appropriate assessment method(s) for each behavioral objective during learning activities.

Student Progress:

The assessment of student progress in the objectives cited on the previous pages will be primarily by, but not limited to, the following criteria:

Tests	45%
Quizzes	20%
Projects	25%
Class Participation	10%

Periodic evaluation of objectives and this curriculum guide:

With the evaluation of a new text every five years, administration requests a curriculum re-write in 2012 (Updated on March 2008).

Homework Policy: (Where applicable)

Students are responsible for submitting assignments on the due date. Assignments turned in late will be deducted 10 points per day. No assignment will be accepted after the third day.

Regarding class work: if a student is absent for a day, he/she will be given two (2) days to finish work missed. If a student is absent for several days, up to a week, the student will be given two weeks to make up the assignment upon the student’s return to school. If a student is absent longer than two weeks, a special arrangement will be made between the student and the teacher for completion of the work missed. If assignments are not completed in the time allotted, a grade of zero (0) will be given for each missed assignment.

Lab/Classroom set up and special needs:

This course needs to be taught in a room equipped with no more than 24 computer workstations, a whiteboard, and a teacher workstation.

For technical assembly, deconstruction, and demonstration, the use of a worktable with access to electricity, or the use of a “shop” would be necessary.