

COURSE DESCRIPTION

Department and Course Number	CS 160	Course Coordinator	Raj Pamula
Course Title	Introduction to Computers	Total Credits	3

Current Catalog Description:

History of computers; hardware, software including data base systems, word processors, spreadsheets, programming languages; social and ethical implications.

Textbook:

Shelly, Cashman, Veermat., *Discovering Computers 2005 (introductory) & Office 2003 (essential)*, Course Technology, 2004.

References:

None

Course Goals:

At the end of the course, students understand

- The history of computers
- Hardware essentials of a computer
- The difference between system and application software
- Social and Ethical implications of computing

This course is offered as a service course for non CS majors

Prerequisites by Topic:

General Education mathematics requirement.

Major Topics Covered in the Course:

- Introduction to Computers
 - Hardware, Software, Operating Systems, Classification of Computers
- The Internet and the World Wide Web
 - Internet, WWW, E-Mail, FTP, Web Publishing
- Application Software
 - Word Processing, Spreadsheet, Database, Presentation Software
 - Software for home, personal, and educational use
- The Components of the System Unit
 - Processors, Memory, Ports, Buses, Peripherals
- Input
 - Keyboards, Mouse, Camera, Scanner, PDAs
- Output

- Display devices, Printers, Speakers
- Storage
 - Floppy and Zip disk, CDs and DVDs
- Operating Systems (OS) and Utility Programs
 - Functions of OS
 - Windows, Unix, Linux
 - Utility programs such as Antivirus, File Compression, Maintenance programs.
 - How to purchase, install and maintain a Personal Computer
- Communications and Networks
 - Network topologies
 - Communication Software and Internet Service Provider
 - Modems: Dial-up, DSL, Cable, ISDN
 - Home Networking
 - Wireless
- Computers and Society, Security, Privacy and Ethics
 - Viruses and Worms
 - Safeguards against system failure
 - Information theft
 - Internet security risks
 - Health and safety concerns

Laboratory Project (specify number of weeks on each):

- 1.5 week Managing files with Windows Explorer, Internet, Paint.
- 1.5 week Formatting documents with Microsoft Office Word
- 1.5 week Formatting, editing, formulas with Microsoft Office Excel
- 1.5 week Creating a chart, modifying it, formatting, with Microsoft Office Excel
- 1.5 week Creating and presenting a Microsoft Office Power Point Presentation.
- 1.5 week Creating a database: table, query, form and report with Microsoft Office Access
- 1.5 week Creating a web page.

Estimate Curriculum Category Content (Quarter Hours)

Area	Service*	Area	Service*
Algorithms		Data Structures	
Software Design		Prog. Languages	
Comp. Arch.		Other	3.0

Service* : This course is offered as a service course for non CS majors.

Oral and Written Communications:

Students are required to write and present projects orally in the class.

Social and Ethical Issues:

1-2 weeks is devoted on topics related to Social and Ethical Issues.

Theoretical Content:

No significant component.

Problem Analysis:

Students are required to analyze tasks that require the use of various application software packages, including spreadsheets and databases.

Solution Design:

Students are required to develop solutions using Excel and other application software packages.