

Course Outline

1. Document Information

Degree Program	Computer Science
Course Number	CS 200B
Course Title	Computer Concepts
Semester Hours	3
Course Coordinator	Chun-Hsi Huang
Revision Term	Spring 2020
Latest Revision	Spring 2020

2. Catalog Description

The course is designed to provide participants with a broad overview of computer concepts including key terminology and components of computer hardware, software, and operating systems. Topics will include, but are not limited to computer architecture, peripheral devices, networking components, system software, information system analysis, application software including word processing, database management, spreadsheet, and presentation software. Discussion will also include the Internet and Web page development

3. Textbooks

- Gaskin, V. & Graviett, G. (2017). Go! All in One Computer Concepts and Applications. Pearson Publications, 3rd Edition. ISBN:9780134505749.

4. References

5. Course Learning Outcomes

- Students will be able to see the development of the current computer technology in the historic perspective.
- Students will be able to decide between various computer platforms most suited for their use.

- Students will be able to explain various memories and storage devices, including random access, read only memory, secondary storage, and unit of measurement for memory and storage.
- Students will be able to use common and some sophisticated functionalities of Microsoft office applications including word processing, database management, spread sheet, and presentation software.
- Students will be able to understand and explain the differences between freeware, share ware, and copy righted software.
- Students will be able to discuss different type malicious software and viruses and means of protecting the computer and information from attacks.
- Students will be able to explain different type of networks based on logical arrangements as well as proximity of the nodes.
- Students will be able to explain the history of Internet development and some of the technology utilized.
- Students will be able to understand functionality of servers and clients hardware and software.
- Students will be able to develop simple web pages using application tools.
- Students will be able to discuss issues surrounding Artificial Intelligence.
- Students will be able to develop database tables and create queries in Microsoft Access.
- Students will be able to develop spreadsheets in Microsoft Excel.
- Students will be able to develop presentations in Microsoft PowerPoint.

6. Assessment of the Contribution to Student Outcomes

Outcome	1	2	3	4	5	6
Assessed						

7. Prerequisites by Topic

No prerequisite.

8. Major Topics Covered in the Course

1. Hardware:

Introduction to Computer Hardware: Historic development, people, machines

Central Processing Unit: Binary numbers, architecture, history, features

Memory: Random access memory RAM, read only memory ROM, programmable ROM

Input Output Hardware Devices: Voice input/output, screens, printers

Secondary Storage: Hard drive, optical drives

System Expansion Buses: ISA, EISA, PCI, network cards, multimedia

Networks: Topology, Protocols, Internet Technologies

2. Software:

Introduction to Computer Software, System Software, Operating Systems, Utility Software

Introduction to Web Page Development: Using HTML, Web development tools

Introduction to Presentation Software: Using master slide and templates, transitions and effects, creating action buttons and hyperlinks

Introduction to Spreadsheets: Designing and creating a worksheet, using formulas and functions, creating and editing charts, creating and editing macros

Introduction to Data Base Management: Table creation, form creation, query creation, report creation.

3. Introduction to Information Systems Analysis: System development life cycle, tools and techniques, introduction to programming languages, management of information systems, careers in information systems.

4. Computer Networks, Security and Ethics: Encryption, viruses, laws

5. Artificial Intelligence: Expert system, decision support systems, virtual reality