**Course Description**

**Introduction to Computing (2+1)** This course, using both lecture and laboratory practice,

introduces students to basic computer concepts in hardware, software, networking, computer security, programming, database, e-commerce, decision support systems, and other emerging technologies such as blogs, wiki, RSS, podcasting, and Google applications. Additional lectures examine social, legal, ethical issues including privacy, intellectual property, health concerns, green computing, and accessibility. Students learn techniques to search, evaluate, validate, and cite information found online. Widely used applications including word processing, spreadsheets, databases, presentation, and web development software are studied.

**General Education Course**

Almost no area of academic, professional, or personal life is untouched by the information

technology revolution. Success in college and beyond requires computer and information literacies that are flexible enough to change with a changing IT environment and adaptable to new problems and tasks.

The purpose of the information technology requirement is to ensure that students achieve an essential understanding of information technology infrastructure encompassing systems and devices; learn to make the most of the Web and other network resources; protect their digital data and devices; take advantage of latest technologies; and become more sophisticated technology users and consumers.

1. Students will be able to use technology to locate, access, evaluate, and use information, and appropriately cite resources from digital/electronic media.

2. Students will understand the core IT concepts in a range of current and emerging technologies and learn to apply appropriate technologies to a range of tasks.

3. Students will understand many of the key ethical, legal and social issues related to information technology and how to interpret and comply with ethical principles, laws, regulations, and institutional policies.

4. Students will demonstrate the ability to communicate, create, and collaborate effectively using state-of-the-art information technologies in multiple modalities.

5. Students will understand the essential issues related to information security, how to take

precautions and use techniques and tools to defend against computer crimes.

**Objectives**

*After successful completion of the course, the students will be able to –*

Understand basic functions of computer hardware and software components including

operating system functions

Identify various networks (LAN, WAN, intranet), topologies (ring, bus, star), protocols

(TCP/IP, SMTP, POP & IMAP, HTTP & HTTPS, DNS), media types (wire pair, coaxial cable, fiber optics, microwave, radio frequency, infra-red), and network hardware (router, hub, gateway).

Know how to use search techniques (inclusion, exclusion, wildcards, phrase, Boolean

search), evaluate the information found on Web pages (chat rooms, newsgroups, RSS, podcasting sites, Wikipedia, blogs), and cite electronic and printed references.

Understand computer viruses, biometric devices, encryption technique, digital signature,

email filtering, firewall, and precautions on Web.

Understand ethical issues regarding copyright, software licenses, information privacy,

intellectual property, content filtering, Spam, and laws enacted with regards to SPAM,

children’s protection on Web, electronic communication, and electronic theft.

Understand IT impact on society (health and environment)

Design and create web pages using HTML

Create blogs and wikis

Use different application programs like word processing, spreadsheet, presentation, and

database management systems

Understand the fundamentals of system analysis, life cycle of a program development and

programming languages, artificial intelligence, and e-commerce.

**Grading**:

Quizzes: (Best of 3) 10%

Attendance: 5%

Course Project: 5%

Midterm: 30%

Final: 50%