CSIT 2301 - INTRODUCTION TO INFORMATION TECHNOLOGY

CREDIT HOURS: 3
PREREQUISITES: CSIT 1300 and CSCI 1302; or CSCI 2302
GRADE REMINDER: Must have a C or better in each prerequisite course.

CATALOG DESCRIPTION

Introduction to the field of information technology, including the hardware, software and networking concepts required to understand the modern computing and communications world. Use scripting languages available on current operating systems and in the Internet environment.

PURPOSE OF COURSE

To introduce students to the basic concepts of computer systems, to fundamental systems software, to a discipline approach to problem solving, to procedural program development in a current scripting language, and to information technology careers.

EDUCATIONAL OBJECTIVES

Upon successful completion of the course, students should be able to:

1. Understand the components of a contemporary computer and know how to assemble them from components.

2. Execute basic commands to manage computers running Microsoft Windows and Unix/Linux/OS X.

3. Convert between binary, decimal and hexadecimal representations, and understand where these representations are necessary in dealing with data and commands.

4. Explain basic concepts of networking, and give examples of the functions at each layer in the OSI model.

5. Understand the concept of information and how information is stored, utilized and secured within the context of information technology.

6. Read and discuss current articles in the professional IT press dealing with trends in IT infrastructure and its context.

7. Understand and differentiate between the available career paths in Information Technology.

COURSE CALENDAR

This course meets for a minimum of 37.5 lecture contact hours during the semester. Students have significant weekly reading assignments. Students are expected to complete weekly homework and/or lab assignments, and 2-3 periodic exams in addition to the final exam. Students are expected to prepare for any class assignments or quizzes over the material covered in class or in the reading material. Successful completion of these activities requires at a minimum six additional hours of outside of classroom work each week.

CONTENT	**Hours**
Introduction to Information Technology	3
Basic Concepts of Computer Systems Architectural overview Data storage and representation Computing environments Computer languages	9
Systems Software Operating systems, editors, compilers Files, directories, user management Process and services	9
Networking and the Internet OSI Model Network configuration and tools	6
Programming Languages Shell scripting, markup languages Client-Side scripting	12
Ethics and Careers	3
Exams	3
TOTAL	45

REFERENCES

B.W. Kernighan, “Understanding the Digital World: What You Need to Know about Computers, the Internet, Privacy, and Security,” Princeton University Press, 2017. ISBN: 978-0691176543

W. Shotts, “The Linux Command Line: A Complete Introduction,” 5th Internet Edition, 2019, PDF is freely available on http://linuxcommand.org/tlcl.php