COLLEGEWIDE COURSE OUTLINE OF RECORD

EECT 122, DIGITAL APPLICATIONS

COURSE TITLE: Digital Applications
COURSE NUMBER: EECT 122
PREREQUISITES: EECT 112 Digital Fundamentals
SCHOOL: Technology
PROGRAM: Electronics and Computer Technology
CREDIT HOURS: 4
CONTACT HOURS: Lecture: 3 Lab: 2
DATE OF LAST REVISION: Summer, 2011
EFFECTIVE DATE OF THIS REVISION: Fall, 2011

COURSE DESCRIPTION: This course continues the study of combinational and sequential digital applications. The input and output characteristics of the various common logic families and the appropriate signal conditioning techniques for on/off power interfacing are discussed. Also stressed are standard logic function blocks, digital and analog signal interfacing techniques, and memory devices.

MAJOR COURSE LEARNING OBJECTIVES: Upon successful completion of this course the student will be expected to:

1. Construct, test, and troubleshoot digital circuits and subsystems.
2. Analyze the theoretical operation of given digital circuits and subsystems.
3. Design digital circuits and subsystems with specified characteristics or for specified applications.
4. Perform binary and hexadecimal arithmetic operations.
5. Apply standard logic blocks in various digital circuit applications.
6. Design sequential logic circuits using programmable logic devices for various digital applications.
7. Analyze digital circuits using digital simulation software.
8. Interpret published voltage, current, and timing parameters for digital devices.
9. Compare the characteristics of the major IC logic families.
10. Analyze and design digital wave shaping and timing circuits.
11. Interface analog inputs or outputs to digital circuits.
12. Interface digital outputs to drivers and actuators.
13. Analyze the addressing organization for given memory systems.
14. Design memory systems using specified memory chips.

COURSE CONTENT: Topical areas of study include –

Flip-flops	ROM memory
Asynchronous counters	Ring counters
Synchronous counters	D-to-A converters

Shift registers	A-to-D converters
Arithmetic logic units	Digital displays
RAM memory	Arithmetic-logic units
Display decoders	PLD devices
7-Segment displays	Control busses
Data busses	Address busses

HOW TO ACCESS THE IVY TECH COMMUNITY COLLEGE LIBRARY:

The Ivy Tech Library is available to students' on- and off-campus, offering full text journals and books and other resources essential for course assignments. Go to http://www.ivytech.edu/library/ and choose the link for your campus.

ACADEMIC HONESTY STATEMENT:

The College is committed to academic integrity in all its practices. The faculty value intellectual integrity and a high standard of academic conduct. Activities that violate academic integrity undermine the quality and diminish the value of educational achievement.

Cheating on papers, tests or other academic works is a violation of College rules. No student shall engage in behavior that, in the judgment of the instructor of the class, may be construed as cheating. This may include, but is not limited to, plagiarism or other forms of academic dishonesty such as the acquisition without permission of tests or other academic materials and/or distribution of these materials and other academic work. This includes students who aid and abet as well as those who attempt such behavior.

COPYRIGHT STATEMENT:

Students shall adhere to the laws governing the use of copyrighted materials. They must insure that their activities comply with fair use and in no way infringe on the copyright or other proprietary rights of others and that the materials used and developed at Ivy Tech Community College contain nothing unlawful, unethical, or libelous and do not constitute any violation of any right of privacy.

ADA STATEMENT:

Ivy Tech Community College seeks to provide reasonable accommodations for qualified individuals with documented disabilities. If you need an accommodation because of a documented disability, please contact the Office of Disability Support Services.

If you will require assistance during an emergency evacuation, notify your instructor immediately. Look for evacuation procedures posted in your classroom.

SYLLABUS FOR EECT 122, DIGITAL APPLICATIONS

The instructor will provide students with a course syllabus on the first scheduled class meeting. The syllabus should communicate clear and concise information to help the student understand the scope of the course and expectation for successful completion. The following information will appear on the syllabus and be identical to information on the Course Outline of Record (COR):

Required Syllabus Information from (COR)

- Course title
- Course prefix and number
- Prerequisite(s)
- Corequisite(s)
- Program
- Division
- Credit hours
- Contact hours
- Catalog description
- Major course learning objectives
- Course content
- Academic honesty statement
- ADA statement

Additional Required Syllabus Information

The syllabus must also contain the following additional information. The instructor may determine the content of this information.

- Instructor
- Course section number
- Additional course learning objectives (if required)
- Required text, or other instructional materials
- Required consumable materials and equipment supplied by student
- Instructor phone number
- Instructor e-mail address
- Instructor office location and hours
- Method(s) of instructional delivery
- Method(s) of evaluation
- Grading scale
- Make-up policy
- Attendance policy
- Activities schedule, including calendar of topics, assignment, test, etc.

- Last date to drop course without grade
- The name and location of the Disability Service Coordinator
- Right of revision statement

Optional Syllabus Information

Faculty are encouraged to provide additional information that will help the student understand in more detail how the class will be conducted.

- Extra credit work, if applicable
- Class/lab relationship
- References or reading that are optional but recommended
- Format for papers, projects, or other assignments
- Computer room/lab rules if applicable
- Withdrawal process and responsibility
- Other