

Bergen Community College
Division of Math, Science and Technology
Computer Science, Engineering & Information Technologies

Course Syllabus
ELC 203 Digital Electronics Circuits I

Semester and year:

Course Number:

Meeting Times:

Instructor:

Email Address:

COURSE TITLE: ELC 203 Digital Electronics Circuits I COURSE CREDIT:

3 Lecture, 3 Lab, 4 credits

PREREQUISITE ELC-201 AC-Circuit Analysis

COURSE DESCRIPTION: Digital Electronics Circuits I is an introduction to the fundamental concepts and applications of solid-state and digital devices.

STUDENT LEARNING

OBJECTIVES:

As a result of meeting the requirements in this course, students will be able to:

1. Recognize and understand how basic diodes, transistors and logic gates function.
measured by: Lab Projects, Assignments, Quizzes and Exams
2. Read and understand circuit diagrams that include diodes and transistors as circuit elements.
and Exams
3. Draw circuit diagrams including diodes and transistors using the Multisim or equivalent computer program.
Lab Projects, Assignments, Quizzes and Exams
4. Develop physical measurements on diodes and transistors using physical lab equipment.
Lab Projects, Assignments, Quizzes and Exams
5. Apply mathematical functions
Lab Projects, Assignments, Quizzes and Exams

Student performance on these objectives will be

along with combinational logic. Lab Projects, Assignments, Quizzes and Exams

TEXT: Electronic Principles, 9th Edition, Albert P. Malvino and David Bates, McGraw Hill, 2021,
ISBN 9781259852695

LABORATORY: There will be Lab experiments for electronics and digital logic using; resistors, diodes, transistors, physical bread boards/circuit boards and simulated circuits

COURSE CONTENT:

Textbook Chapters

Chapter Topic

- 1 Introduction
- 2 Digital Systems and Information
- 3 Semiconductors
- 4 Diode Theory
- 5 Diode Circuits
- 6 Special Purpose Diodes
- 7 Combinational Logic Circuits
- 8 Arithmetic Functions HDL (High-Level Design Languages)
- 9 BJT Fundamentals (Bipolar Junction Transistors)
- 10 Transistor Biasing

Evaluation:

Exams.....	50%
Lab Assignments.....	20%
Homework.....	10%
Final Exam.....	20%

Attendance policy:

BCC Attendance Policy: "All students are expected to attend punctually every scheduled meeting of each course in which they are registered. Attendance and lateness policies and sanctions are to be determined by the instructor for each section of each course. These will be established in writing on the individual course outline. Attendance will be kept by the

instructor for administrative and counseling purposes.”

COURSE CALENDAR:

Week	Month	Monday		Wednesday	
1					Intro to class
2			Ch.1 Basics		Ch.2 and Lab Intro
3			Ch.3		Lab Ch.3
4			Ch.4		Ch.4
5			Ch.4		Lab on Ch.4
6			Ch. 5		Ch. 5
7			Lab Ch. 5		Exam #1
8			Ch.6		Ch.6
9			Ch.7		Ch.7
10			Lab Ch 6-7		Exam #2
11			Ch.8		Ch.8
12			Ch.9		Review
13			Exam #3		Thanksgiving break
14			Lab on Ch.9		Ch.10
15			Ch.10		Review
16			Review		Final Exam

Civility/Classroom Conduct

As a college of choice, Bergen Community College provides a comfort level that enables

students of all abilities to mature as learners and engaged citizens. Therefore, it is important that this class provide a stimulating, rigorous, and inclusive learning environment. To that end, students must demonstrate respect to others and to ideas and opinions expressed in the class. Use of cell phones and laptops is prohibited, unless special permission is granted. Anyone not following these standard procedures may be asked to remove him/herself from the class.

Services for Students with Disabilities:

A wide variety of services are available for students with documented disabilities through the Office of Special Services (OSS) [Room S – 131, (201) 612-5270]. OSS is dedicated to serving students with physical, visual, learning, hearing, and emotional disabilities. If a student has been classified in high school or had a 504 plan, it is highly recommended that the student contact OSS during the college application process. A more detailed explanation can be found on the College web site, www.bergen.edu. Personal information is kept confidential. Examples of the types of accommodations and services include: Extended test taking time Organizational strategies.