

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

Course Syllabus
ELC 204 Digital Electronics Circuits II

Semester and year:

Course Number:

Meeting Times:

Instructor:

Email Address:

COURSE TITLE: ELC 204 Digital Electronics Circuits II COURSE CREDIT: 3

Lecture, 3 Lab, 4 credits

PREREQUISITE: ELC-203 Digital Electronics Circuits I

COURSE DESCRIPTION: Digital Electronics Circuits II is a continuation from Digital Electronics I fundamental concepts and applications of solid-state and digital devices.

STUDENT LEARNING OBJECTIVES:

As a result of meeting the requirements in this course, and Exams Lab Projects, Assignments, Quizzes students will be able to: 1. Recognize and

understand how basic

diodes, transistors and logic gates function and Exams

2. Read and interpret circuit diagrams that include diodes and transistors as circuit elements.

3. Draw circuit diagrams including diodes and transistors using the Multisim or equivalent computer program.

4. Develop physical measurements on diodes and transistors using physical

Student performance on these objectives will be

measured by: Lab Projects, Assignments, Quizzes

Lab Projects, Assignments, Quizzes and Exams

lab equipment. Lab Projects, Assignments, Quizzes and Exams

5. Apply mathematical functions along

with combinational logic. Lab Projects, Assignments, Quizzes and Exams 6. Implement Boolean algebra and

Kmapping to reduce logic hardware to a minimum number of gates.

Lab Projects, Assignments, Quizzes and Exams

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

LABORATORY: Lab experiments for electronics and digital logic using, resistors, diodes, transistors, and etc. Physical bread boards/circuit boards and simulated circuits.

COURSE CONTENT:

Week Topic

- 1 CC and CB Amplifiers
- 2 Power Amplifiers
- 3 JFETS
- 4 MOSFETS
- 5 Sequential Logic
- 6 Sequential Logic (Continued)
- 7 Combinational Logic Circuits
- 8 Counters using the SN7490
- 9 Multiplexor
- 10 Frequency Effects
- 11 Differential Amplifiers
- 12 Operational Amplifiers
- 13 Active Filters
- 14 Review
- 15 Final Exam

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		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.8-9		Ch.8-9
12			Ch.10-11		Review
13			Exam #3		Thanksgiving break
14			Lab on Ch.11		Ch.11-12
15			Ch.13		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.