LAGUARDIA COMMUNITY COLLEGE
CITY UNIVERSITY OF NEW YORK
DEPARTMENT OF MATHEMATICS, ENGINEERING, and COMPUTER SCIENCE

MAC241 – COMPUTER ELECTRONICS 4 credits; 6 hours (4 lecture, 2 lab)

Catalog Description:
This is a course in the fundamentals of DC and AC electric circuit theory which will provide basis for further study and concentration in computer repair and telecommunications. Among the topics to be considered are Ohm's Law, power, Kirchhoff's Laws, voltage divider rule, RC time constants, measurement techniques, and some basic electronic components such as resistors, capacitors and inductors. The laboratory work will include experiments using voltmeters, ammeters, oscilloscopes, and breadboards. The student should expect to pay for additional materials for this course

Book: Electric Circuits Fundamental
8th Edition
ISBN:0-13-507295-0

Experiments in Electronics Fundamentals and Electric Circuits Fundamentals
By Buchla
6th Edition
ISBN: 0-13-111277-5

Evaluations:

Lab projects (6 total) ……..20%
Quiz…….20%
Mid term exam……30%
Final exam……...30%

Attendance:

The maximum number of absences will be **11 hours**. Unexcused absences beyond the maximum will result in grade **WU** or **F**.

Course Outline

Week Topics

1	Introduction The Basic Electrical Quantities
2	OHM's Law and Power
3	Series Circuits
4	Parallel Circuits and Quiz
5	Serial-Parallel circuits
6	Magnetism and Electromagnetism
7	Introduction to AC Midterm exam
8	Capacitors
9	Inductors
10	Transformers
11	Frequency Response of RC Circuit
12	Review
13	Final Exam

Projects: **3**,4,**5**,**6**,7,9,10,**12**,**13**,15,**18**
(Written reports for project 3, 5,6, 12,13,18 are required)