THE INTERNATIONAL UNIVERSITY (IU) – VIETNAM NATIONAL UNIVERSITY - HCMC

School of Electrical Engineering

Principles of Electrical Engineering I Laboratory

1. Course number and name
EE052IU-Principles of Electrical Engineering I Laboratory

2. Credits and contact hours
Credit hours: 1, four periods (45 minutes per period), once per week

3. Instructor's or course coordinator's name
Nguyen Minh Thien, MEng.

4. Textbook, title, author, and year
a. Other supplemental materials
- Laboratory manuals supplied by the instructor

5. Specific course information
a. brief description of the content of the course (catalog description)
This course conducts sequence of laboratory experiments to present and illustrate the operation of basic electronic circuits.
b. pre-requisites or co-requisite
Co-requisite
EE051-Principles of Electrical Engineering I
c. indicate whether a required, elective, or selected elective (as per Table 5-1) course in the program
This is a required course for both Automatic Control and Electrical Engineering undergraduates

6. Specific goals for the course
a. Specific outcomes of instruction, ex. The student will be able to explain the significance of current research about a particular topic.

Upon on the successful completion of this course, students will be able to
1. Operate electric equipment, multi-meters, power supplies, oscilloscopes and function generator; To study the behavior of some specified circuits
2. Apply critical and analytic thinking to the principles of electrical engineering process
3. Demonstrate creative thinking in the design of electrical engineering solutions
4. Have an opportunity to examine case studies to understand the professional and ethical responsibility as an engineer.

b. Explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course.

The relationship between Course Outcomes (1-5) and Student Outcomes (1-7) is shown in the following table:

	1	2	3	4	5	6	7
CO1						x	
CO2	x				x		
CO3				x			
CO4				x			
Total (%)	20			20	20	40	

Total Evidence: 03 Lab reports.

Course grading policies:

- Presence in laboratory (10%)
- Laboratory experimental sessions (60%): including pre-lab report and laboratory experimental report.
- Final Exam (30%).

7. Brief list of topics to be covered

- Introduction to electric circuit laboratory
- Kirchhoff's current and voltage laws
- Frequency and phase shift measurement
- Thevenin's theorem for AC circuits
- Mesh and nodal analysis of AC circuits
- Operational Amplifiers
- Circuits utilizing op-amps

Independent Learning Experiences:

- A pre-lab exercises are given before formal lab time. These exercises are required to be finished by each student and presented to the lab instructor.
- Lab reports are weekly collected and graded.

Course Policies:

- Lab completeness: There are total 7 labs. Students must use the official template of SEE to write their reports. Students are required to complete all of questions given in lab procedure within time permitted for each lab, with the results shown to lab instructor.
- Policy on dishonesty: Students are expected to do their own pre-lab exercises at all times. Any evidence of plagiarism or cheating will be treated as grounds for a penalty of 10% in the lab.

Link to download materials: **http://blackboard.hcmiu.edu.vn/**

Lecture hours: depends on semester calendar .

Office hours: based on detailed semester calendar, or by appointment @ O2.206

Contact information: nmthien@hcmiu.edu.vn

Prepared by: Nguyen Minh Thien