Sirindhorn International Institute of Technology

Thammasat University at Rangsit

School of Information, Computer and Communication Technology

Course Title : **ECS 210 Basic Electrical Engineering Laboratory**
Semester : **2/2010**
Instructor : **Dr. Prapun Suksompong (prapun@siit.tu.ac.th)**
Time : **Monday 01:15-4:15 PM (EC2)**
Place : **Room BKD 3502**
Website : **http://www2.siit.tu.ac.th/prapun/ecs210**

SCHEDULE

Date	Experiments
November 15, 2010	L0: Introduction
November 22, 2010	L1: DC Measurements
November 29, 2010	L2: Network Theorems I
December 6, 2010	No Lab
December 13, 2010	L3: Network Theorems II
December 20, 2010	E1: Midterm Exam
December 27, 2010	Mid-term Examination Period (No classes)
January 3, 2011	No Lab
January 10, 2011	L4: AC Measurement
January 17, 2011	L5: Resonance RLC Circuits
January 24, 2011	L6: Diodes and Rectifiers
January 31, 2011	L7: Operational Amplifiers
February 7, 2011	L8: Filters and Circuit Design
February 14, 2011	R: Practice Session
February 21, 2011	E2: Final Exam (Part A: In Lab)
March 11, 2011	E3: Final Exam (Part B)

GRADING

Contents	Percentage
1. Quiz	**10 %**
2. Lab reports	**30 %**
3. In-lab participation/performance	**10 %**
4. Midterm examination	**20 %**
5. Final examination (Part A + B)	**15 + 15 %**
Total	100 %

Laboratory regulations:

1. T-shirt, slippers, sandals, and bare feet are absolutely **NOT** allowed in the laboratory.
2. Food and drink are **NOT** allowed.
3. Any student who comes 15 minutes after the class has begun will be considered absent. Without warning, a student who is absent for more than ***two*** experiments will get an "**F**".
4. Students are financially responsible for the loss or damage of instrument in the laboratory.
5. For student who copies any part of the report, a zero score will be given to the whole corresponding experiment (item 1 - 3 in grading above). Repetition of such action will result in an **"F"**.
6. When each experiment is completed, all students must ask the lab supervisor or the teaching assistants to sign on the sheet where experimental results are recorded. The sheets are provided in the lab manuals; they must be submitted with the report.

Report guidelines:

1. Lab report has to be submitted in group (**i.e., 1 copy per group**). It **must be neatly PRINTED on a clean A4 paper.** Students must submit their reports at the beginning of the next lab before they can take the quiz. **Students are not allowed to take the quiz if lab report has not been submitted.**
2. Template for the report is available on the course web site. A report consists of:
    a) A cover page containing the subject, objectives, date and time of the experiment, group no., section, name and ID.
    b) Two sets of experimental results (with lab supervisor's signatures) which are completed according to the procedure in the manual.
    c) Tables of experimental results (printed).
    d) Discussion which should include the related theory, the error, in percentage, reflecting the difference between the experimental result and the theoretical calculation for each part of the experiment.
    e) The conclusions where you must demonstrate your understanding of the experiments according to the objectives, as well as the knowledge gained from the experiment.
    f) Answers to questions in the manual.

Grading policy:

The final letter grade is assigned based on individual performance comparing to the rest of the class. The criteria are often flexible. To give you some idea on how the grade is assigned, the criteria that have been used before are given below:

Letter grade	Percentage
A	95-100
B+	85-94
B	75-84
C+	65-74
C	60-64
D+	55-59
D	50-54
F	0-49

References:

[1] Y. Tsividis, A First Lab in Circuits and Electronics, John Wiley & Sons, 2002.
[2] C. K. Alexander and M. N. O. Sadiku, Fundamentals of Electric Circuits, McGraw-Hill, 2000 (*TK454 A452 2000*).
[3] W. Nilsson, Electric Circuits, 6th Edition, Prentice Hall, 2000 (*TK454 N54 2000*).
[4] R. C. Dorf and J. A. Svoboda, Introduction to Electric Circuits, 5th Edition, 2001 *(TK454 D67 2001*).
[5] J. D. Irwin, Basic Engineering Circuit Analysis, John Wiley & Sons, 2002 (*TK454 I78 2002*).