



Sirindhorn International Institute of Technology
Thammasat University at Rangsit
School of Information, Computer and Communication Technology

Course Title	: ECS 204 Basic Electrical Engineering Laboratory
Semester	: 1/2015
Instructor	: Asst. Prof. Dr.Prapun Suksompong (prapun@siit.tu.ac.th)
Time	: Friday 09:00-12:00 (Section 4: CPE3) : Friday 13:00-16:00 (Section 5: CPE3)
Place	: Room BKD 3502
Website	: http://www2.siiit.tu.ac.th/prapun/ecs204

SCHEDULE

Date	Experiments
August 14, 2015	No Lab
August 21, 2015	L0: Introduction
August 28, 2015	L1: DC Measurements
September 4, 2015	L2: Network Theorems I
September 11, 2015	L3: Network Theorems II
September 18, 2015	P1: Practice Session
September 25, 2015	E1: Midterm Exam (In Lab)
October 2, 2015	Mid-term Examination Period (No Lab)
October 9, 2015	Mid-term Examination Period (No Lab)
October 16, 2015	L4: AC Measurement
October 23, 2015	No Lab (King Chulalongkorn Memorial Day)
October 30, 2015	L5: Resonance RLC Circuits
November 6, 2015	L6: Diodes and Rectifiers
November 13, 2015	L7: Operational Amplifiers I
November 20, 2015	L8: Operational Amplifiers II
November 27, 2015	P2: Practice Session
December 4, 2015	E2: Final Exam (In Lab)

GRADING

Contents	Percentage
1. Quizzes	10 %
2. Lab reports (L1-L8)	30 %
3. In-lab participation/performance	10 %
4. Midterm examination (E1)	25 %
5. Final examination (E2)	25 %
Total	100 %

Laboratory regulations:

1. Jeans, T-shirt, slippers, sandals, and bare feet are **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 part of 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 TA'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 results and the theoretical calculations for each part of the experiment.
 - e) The conclusion 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. Tsvividis, A First Lab in Circuits and Electronics, John Wiley & Sons, 2002.
- [2] C.K. Alexander and M.N.O. Sadiku, Fundamentals of Electric Circuits, 4th ed., McGraw-Hill, International Edition, 2009.
- [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*).