WELCOME TO

ELECTRICAL LAB
(SKEU 3741)
2016-2017- 2
LAB BRIEFING
LAB COORDINATOR

MR ISMAIL ARIFFIN

Room: P04-422/423

Tel: 07-5536019/0197147832

Email: ismail@fke.utm.my

ROLES:

1. MANAGE LAB GROUPING
2. COORDINATE LAB ACTIVITY
3. AUTHORIZE LAB REPLACEMENT FOR STUDENT WITH VALID REASONS
4. COMPILe LAB GRADES
Objectives

To expose the students to some common electrical components and measurement instruments that can be used in experiments on the electrical and electronic engineering. On the other hand, this laboratory will provide the skill of using electronic devices and measurement instruments to the students. This subject also helps the students to apply the basic theory based on electrical and electronic engineering in design problems.
<table>
<thead>
<tr>
<th>Laboratory</th>
<th>Details</th>
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</thead>
</table>
| 1 - ELECTROTECHNICS LAB (P07-412) | Assistant engineer: Mr Mohd Fadhirul Saminan  
Tel: 07-5535256 |
| 2 - BASIC ELECTRONICS LAB (PO4-311) | Assistant engineer: Mr Mohd Fitri Amir  
Tel: 07-5535283 |
Experiment Topics

ELETROTECHNIC LAB (4) - SIMULTANEOUS

1. Experiment 1 - Norton and Superposition Theorems
2. Experiment 2 - AC Circuit
3. Experiment 3 - R-L and R-C Series Circuit Transient
4. Experiment 4 - RLC Series Circuit Transient

Note:
1. Print labsheet from lab website
2. Each group brings graph paper and a laptop installed with PSPICE software
3. Each person must do pre-lab work and submit to lab assistant engineer before doing the lab experiment
Experiment Topics

BASIC ELECTRONICS LAB (4) – IN SEQUENCE

Experiment 1 - Diode
Experiment 2 - BJT Amplifier (PART 1)
Experiment 3 – BJT Amplifier (PART 2)
Experiment 4 – Operational Amplifier

Important:
1. Each group bring breadboard (2) and a labtop installed with MULTISIM software.
2. Do not disconnect last circuit of experiment 1 as it is going to be used in experiment 2.
LAB ASSESSMENT/EVALUATION

LAB MARK:

1. Pre-lab work = 20% (Individual – handle or hand-in before lab start)

2- Report = 20% (Group – Assessment Report form is provided)

3- Oral Interview = 20% (Individual – during experiment session)

4. In-lab performance mark = 40%
LAB ASSESSMENT

- Pre-lab work = 20%

Each pre-lab work must be handed in to the lab at the beginning of lab session
LAB ASSESSMENT

In-lab performance mark = 40%

Please fill in your name in the attendance / performance evaluation form each time you attend the lab.
LAB ASSESSMENT

- Short report = 20%

A short lab report must be submitted before leaving the lab.

*Each submitted short lab report must be attached with a short report evaluation form.*
LAB ASSESSMENTS

Oral interview mark = 20%

- Oral interview will be held in the final minutes for each person for each experiment topic.

- Each student will be interviewed individually for about 5 - 8 minutes.
Lab Replacement

Lab replacement will only be allowed with the permission from the lab coordinator with valid reason such as:

- **sick/illness**: A medical certificate must be issued and verified by the UTM Clinic and submitted to the coordinator immediately.

- **involved in UTM/faculty activities**: Any correspondent letter (a duplicate) must be submitted to the coordinator or lab assistant.
Lab Sheet and Pre-lab Work

Lab sheets are not provided. Obtain lab sheet from the related laboratory website.

Download and print the lab sheet on your own. Please do the pre-lab work (Pre-lab work is in the lab sheet itself or in separate sheet).

Submit the pre-lab work before start lab session. The pre-lab mark is recorded in the in-lab performance evaluation form.
Lab Webpage:

http://www.fke.utm.my

-go to FKE website then click:

→ Laboratories

→ Teaching Laboratories

→ Electrotechnic lab

→ Basic electronic lab

- pre-lab work and lab sheet (self-download)
Lab Grouping Announcement and Lab Time Table

http://www.fke.utm.my

-go to FKE website, Undergraduate student, 2nd lab year lab management, browse the page to look for the wanted information

Or
Lab noticeboard
Lab Rules and Safety Precautions

All safety regulations must be obeyed.
- No slipper
- No round neck t-shirt
- No loose garment/dresses

Else

You are not allowed to attend the lab by the lab staff until you obey the lab rules.
BASIC ELECTRONIC LAB (3rd Floor Block P04)
ELECTROTECHNIC LAB (4th Floor Block P07)
LAB GROUP DIVISION

SECTION 01 AND 02 (SKEU 3741) DIVIDES INTO TWO GROUPS: GROUP A and GROUP B

Section 01 & 02 → Group A
3SKEU

Group B
<table>
<thead>
<tr>
<th>What lab you should enter?</th>
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<tbody>
<tr>
<td><strong>For SKEU 3741</strong></td>
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<table>
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<tr>
<th>Week 1 – 4 (FIRST FOUR WEEKS)</th>
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<tbody>
<tr>
<td>Group A</td>
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<tr>
<td>- <strong>ELECTROTECHNIC LAB</strong> (P07 – 4&lt;sup&gt;th&lt;/sup&gt; Floor)</td>
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What lab you should enter?

For SKEU 3741

Week 5 – 8 (SECOND FOUR WEEKS)

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<tr>
<td>- BASIC ELECTRONIC LAB (P04 – 3rd Floor)</td>
<td>- ELECROTECHNIC LAB (P07- 4th Floor)</td>
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### Group A

<table>
<thead>
<tr>
<th>DAY</th>
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<th>ELECTROTECHNIC</th>
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<tbody>
<tr>
<td>SUNDAY</td>
<td>2 p.m</td>
<td>5A</td>
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<tr>
<td>MONDAY</td>
<td>8 a.m</td>
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<td>WEDNESDAY</td>
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<td>4A</td>
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<tr>
<td>THURSDAY</td>
<td>8 a.m</td>
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### Group B

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PLEASE ENSURE YOUR NAME ARE LISTED IN GROUP LIST PASTED ON THE LAB NOTICE BOARD BEFORE THE LAB SESSION BEGIN

- BASIC ELECTRONIC LAB (P04)

- ELECTROTECHNIC (P07)

OR

VIEW FKE WEBSITE UNDER THE 2ND YEAR LAB MANAGEMENT SECTION:
Kindly consult the lab coordinator immediately if your name is missing from the list
When lab commence for all sections?

Week 2

22 FEBRUARY

2017
Thank you for coming

Do wish all of you enjoy the lab session