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| Faculty: FACULTY OF ENGINEERING |
| Subject : Specialized 3rd Year Laboratory Subject Code : SKEE 3742 | Review Release DateLast Amendment | : 4: 2 Feb 2020: 1 Feb 2015 |



SKEE3742

ADVANCED POWER LABORATORY

**STUDENT PACK**

**Open circuited Distribution System**

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| Prepared by: |  | Approved by:  | Programme Director |
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| Signature & Stamp: |  | Signature & Stamp: |  |
| Date: |  | Date: |  |

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| **1.** | **Problem / Project Guide:** |
|  | - The students have to study three phase systems.- Understand balanced and unbalanced loads.**Questions That Can Help You Tackle the Problem**1. What is three phase four wire feeder?
2. When this type of feeder is important and why?
3. Why a three phase load becomes unbalanced?

The students have to accomplish their task within three weeks’ time. As guide, students may follow the problem solving time-line as given in table below.1. **Problem-solving Time-line**

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| **Activities** | **Week 1** | **Week 2** | **Week 3** |
| **1. Understand/Identify/Brainstorming****(Prepare group proposal, list materials, allocate tasks).** |  |  |  |  |  |
|  |  |  |  |
| **2. Submit individual report/ Experiments and collect data.** |  |  |  |  |  |  |  |
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| **3. Analyse and interpret data/ Demonstration** |  |  |  |  |  |  |  |
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Assessment criteria are standardized for all laboratories and will generally be the same for all laboratories. For further understanding about the assessment criteria, please refer to PBL Third-year Laboratory Assessment document.**Report Writing**Other than the *general guide* specified by the Laboratory Coordinator, the report must include:* + Experimental Procedures
	+ Experimental Data
	+ Photographs of the actual circuit construction
	+ Circuit diagram
	+ Photographs of your group members
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| **2.** | **Equipments list:** |
|  | The Distribution Trainer (NE9202); Load banks consisting of resistor, inductor and capacitor,  |
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| **3.** | **Component list:** |
|  | Connector cables, multimeters |
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| **4.** | **Software** |
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| **5.** | **Additional Resources** |
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| **6.** | **References** |
|  | 1. Hadi Saadat, “Power System Analysis”, 2nd edition, McGraw Hill, 2004.
2. John J. Grainger and William D. Stevenson, JR, “Power System Analysis”, International editions, McGraw Hill, 1994.
3. J. Duncan Glover, Mulukutla S. Sarma and Thomas J. Overbye, “Power System Analysis and Design”, 5th edition, Cengage Learning. 2012.
4. Hughes E, John Hiley, Keith Brown and Ian McKenzie, “Electrical and Electronic Technology”, Pearson: Prentice Hall, 2012.
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