1. **Name of Subject**: Electricity and Basic Logic
2. **Subject Code**: PPC0065
3. **Status of Subject**: Core
4. **Stage**: Foundation
5. **Version**: Date of Previous Version: – March 2011  
   Date of Current Version: – May 2012
6. **Name(s) of academic staff**: Thum Ann, Muhammad Hazimin Wahab, Cheang Pei Ling, Leong Chia Jian, Nor Aini Naim, Sherry Dalilla, Ramlee Adnan, Nur A’fifah Mansor, Mohd. Shaiedi Ishak, Leonard Yew Chi Boon
7. **Rationale for the inclusion of the subject in the programme**: To explore and develop deeper understanding of facts, principles and concepts of Physics comprising topic Electricity, Electronics and Basic Logic for students pursuing degree in Information Technology disciplines.
8. **Semester and Year offered**: Trimester 2
9. **Total Student Learning Time (SLT)**  
   - **Face to Face**:  
     - L = Lecture  
     - T = Tutorial  
     - P = Practical  
     - O = Others  
   - **Total Guided and Independent Learning**  
     - Guided (40+12+ 3.5) = 55.5  
     - Independent = 108  
     - Total = 163.5
10. **Credit Value**: 4 (163.5 / 40 = 4.1)
11. **Prerequisite (if any)**: NIL
12. **Learning outcomes**:  
    - i. State and illustrate the laws, principles and concepts physics in Electricity, Electronics and Basic Logic (Cognitive, Level 1)  
    - ii. Apply the formulas in solving problems in Electricity, Electronics and Basic Logic (Cognitive, Level 3)  
    - iii. Demonstrate the concept of Electricity, Electronics and Basic Logic to the everyday real life example (Cognitive, Level 3, Affective, Level 3)  
    - iv. Analyze scientific and mathematical information in Electricity, Electronics and Basic Logic (Cognitive, Level 4)
13. **Synopsis**: This subject introduces the concept of basic knowledge about circuits, electronics and logical functions and gates concept for students pursuing degree in Science and Technology. In this subject they will learn about basic Electricity, Electronic Devices and Logical Functions and Gates.
14. **Mode of Delivery**: Lecture and tutorial.
15. **Assessment Methods and Types**:  
    - Assignments and Quizzes: 15%  
    - Project and Presentation: 15%  
    - Mid term test: 20%  
    - Final exam: 50%  
    - Total: 100%
16. **Mapping of the subject to the Programme Learning Outcomes**:  
    - To acquire basic knowledge and fundamental principles of computer technology and sciences for IT students.  
    - To apply basic techniques, skills and engineering principles through class activities and project work.  
    - To communicate effectively and work independently, and as member/leader of a team in various context.
To acquire analytical and problem-solving skills

<table>
<thead>
<tr>
<th>Topic</th>
<th>Contents</th>
</tr>
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<tbody>
<tr>
<td><strong>2. Capacitance</strong></td>
<td>Capacitors, Dielectrics, Definition of Capacitance, Series and Parallel Capacitors, Energy Stored In Charged Capacitors.</td>
</tr>
</tbody>
</table>
18. **Teaching and Learning Activities/Total Student Learning Time (SLT):**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Face to Face</th>
<th>Self Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>Tutorial</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Quiz (3)</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>Assignment (2)</td>
<td>-</td>
<td>24</td>
</tr>
<tr>
<td>Midterm Test (1)</td>
<td>1.5</td>
<td>6</td>
</tr>
<tr>
<td>Final (1)</td>
<td>2.0</td>
<td>20</td>
</tr>
<tr>
<td><strong>Sub-total</strong></td>
<td><strong>55.5</strong></td>
<td><strong>108</strong></td>
</tr>
<tr>
<td><strong>Total SLT (hours)</strong></td>
<td><strong>163.5</strong></td>
<td></td>
</tr>
</tbody>
</table>

19. **Main references supporting the subject:**


**Additional references supporting the subject:**


