United International University

Department of Computer Science and Engineering (CSE)

Course Syllabus

1	**Course Title**	Electrical Circuits
2	**Course Code**	CSE 2113
3	**Trimester and Year**	Fall, 2024
4	**Prerequisites**	N/A
5	**Credit Hours**	3
6	**Section**	L & P
7	**Class Schedule**	**Sat/Tue**: 11:11 AM - 12:30 PM (Section L) **Sun/Wed**: 3:11 PM - 4:30 PM (Section P)
8	**Classroom**	Section L: 801 Section P: 309
9	**Course Teacher Information**	Shekh. Md. Saifur Rahman Lecturer, Department of CSE Email: saifur@cse.uiu.ac.bd (**Preferred**) Contact No: 01303-529289 Office Room: 837 (D)
10	**Textbook**	Fundamentals of Electric Circuits (5th Edition) by Alexandar and Sadiku (link)
11	**Reference**	N/A
12	**Counseling Hours**	

Day	Counseling Hours
Saturday	8:30 AM - 11:10 AM, 12:31 PM - 3:10 PM
Sunday	
Monday	As per makeup day schedule
Tuesday	12:31 PM - 1:50 PM
Wednesday	1:51 PM - 3:10 PM

13	**Course Contents (Approved by UGC)**	Fundamental electrical concepts and measuring units, D.C. voltages, current, resistance and power, laws of electrical circuits and methods of network analysis, principles of D.C. measuring apparatus, laws of magnetic fields and methods of solving simple magnetic circuits. Alternating current, Instantaneous and RMS current, voltage and power, average power combinations of R, L & C circuits, Phasor, representation of sinusoidal quantities.

<table>
<tr><td>14</td><td>Course Outcomes (COs)</td><td>
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<tr><th>COs</th><th>Description</th></tr>
<tr><td>CO1</td><td>Demonstrate an understanding of the basic circuit principles by solving simple circuits.</td></tr>
<tr><td>CO2</td><td>Apply circuit analysis techniques like KCL, KVL node and mesh analysis to analyze larger circuits with multiple sources.</td></tr>
<tr><td>CO3</td><td>Simplify complex circuit to speed up solving process by applying different circuit theorems</td></tr>
<tr><td>CO4</td><td>Analyze small AC circuits and relate different AC quantities in practical application.</td></tr>
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<tr><td>15</td><td>Teaching Method</td><td>Lecture, Case Studies, Project Developments.</td></tr>
<tr><td>16</td><td>CO with Assessment methods</td><td>
<table>
<tr><th>CO</th><th>Assessment Method</th><th>Percentage (%)</th></tr>
<tr><td>-</td><td>Attendance</td><td>5</td></tr>
<tr><td>-</td><td>Assignments</td><td>5</td></tr>
<tr><td>-</td><td>Class Tests</td><td>20</td></tr>
<tr><td>CO1, CO2</td><td>MID Exam</td><td>30</td></tr>
<tr><td>CO3, CO4</td><td>Final Exam</td><td>40</td></tr>
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Instructions:

1. **Talking with each other when the class lecture is being delivered is strictly prohibited. For any problem, you can raise your hand and ask me.**
2. If you want to go to the restroom, you can go without asking for my permission.
3. Makeup of the class test is discouraged. If you miss the class test, you have to let me know the reason through email prior to the class test with proper documents. **Do not email me without a strong reason for missing the class test.** If I find the reason satisfactory, I would take the makeup class test within one week. **Remember, after one week makeup of the class test is not allowed anymore.**
4. **Makeup of the MID/FINAL exam is highly discouraged.** If you miss the MID/FINAL exam, you have to let me know the reason with proper documents to the head of the dept. If the head of the dept. permits you. Only then I would take the MID/FINAL exam.
5. **While delivering the class lectures, you can ask any questions related to the topic if you don't understand without any hesitation. Do not be afraid to ask questions. If you can raise good questions, then there might be bonus marks for you!!**
6. If you fail to understand any topics, you can always email me or come to me during counseling hours.
7. I will try to give two assignments. One is before the MID exam and another is before the FINAL exam.

8. I will take four class tests and several class assessments (Instant). Best three from the CTs will be counted.