Upon completion of this course the student will be able to:

1. Use Ohm's law to determine the current in a branch and a voltage between two nodes in an AC circuit.

2. Use Kirchhoff's law to determine the current in a branch and a voltage between two nodes in an AC circuit.

3. Use Thevenin's (Norton's) Theorem nodal analysis and the superposition theorem to analyze a simple circuit with at least 3 components in an AC circuit.

4. Conduct AC analysis on circuits with independent as well as dependent sources.

5. Conduct AC analysis on circuits that have resistors, capacitors, and inductors to determine frequency response.

6. Compute the power in a circuit with resistors, capacitors, inductors, independent sources and dependent sources.

7. Use available circuit simulation software to simulate AC circuit behavior.

8. Effectively prepare written reports of circuits experiments.


10. Analyze simple RL and RC DC switching circuits.