1. **Course number and name**  
   EE 262: Electrical Circuits Laboratory

2. **Credit and contact hours**  
   1 Credit, 3 Lab Hours

3. **Instructor’s or course coordinator’s name**  
   Sandip Roy

4. **Textbook, title, author, and year**  

5. **Specific course information**  
   a. **Catalog Description**: Electrical instruments; laboratory applications of electric laws; transient and steady-state responses of electrical circuits.  
   b. **Prerequisites or corequisites**: EE 261: Electrical Circuits I

6. **Specific goals for the course**  
   By the end of the course, students will be able to  
   - Build and test electrical circuits; correlate experimental results with analytical expectation (1a-1e, 2a-2e, 2g, 5a-5g, 6a-6d, 7a,7b,7f,7g).  
   - Design, build, and test instrumentation systems for electric circuits; compare experimental results with analytical expectations. (1a-1e, 2a-2e, 2g, 5a-5g, 6a-6d, 7a,7b,7f,7g).  
   - Perform basic circuit analysis using computer-based tools such as PSPICE (1a-1e, 2a-2g).

7. **Brief list of topics to be covered**  
   - Equipment familiarization.  
   - Resistors and Ohm’s law.  
   - Kirchoff’s laws.  
   - Series and parallel resistor combinations; circuit reduction.  
   - Thevenin’s theorem.  
   - Non-ideal power supplies; non-ideal meters; operational amplifiers.  
   - Design project – instrumentation system design.  
   - Design project – control system design.  
   - First-order electrical circuits.  
   - Second-order electrical circuits.  
   - Steady-state sinusoidal response and phasors.  
   - Frequency response.  
   - Circuit simulation.