





NORTHERN ILLINOIS UNIVERSITY

PHYS 475 - Laboratory Electronics II

|  <p>Description</p> <p>Syllabus</p> <p>Laboratories</p> <p>Grading</p>  | <h3>Lecture Schedule - Fall 2014</h3> <ul style="list-style-type: none"> Lecture Section 1: M(F) 11:00-13:50 (FW 233) <hr/> <p>Texts:</p> <p>Blackburn, Modern Instrumentation for Scientists and Engineers (2001) On reserve in the Faraday Library: (used by this course in other years)</p> <ul style="list-style-type: none"> A. de Sa - Electronics for Scientists (1997) Horowitz and Hill - Art of Electronics (2nd Ed. 1989) Simpson - Introduction to Electronics for Scientists and Engineers (2nd Ed. 1987) <hr/> <h3>Weekly Lectures and Problem Assignments</h3> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Week of</th> <th style="width: 20%;">Lecture Slides (PDF)</th> <th style="width: 40%;">Reading</th> <th style="width: 30%;">Problems (from Blackburn)</th> </tr> </thead> <tbody> <tr> <td>8/25</td> <td>DC Circuits Active Rectifiers</td> <td>Blackburn : chapters 1, 2 Simpson: 4.11, 10.12-10.13</td> <td>2.1, 2.2</td> </tr> <tr> <td>8/25</td> <td>Labor Day, no lecture</td> <td></td> <td></td> </tr> <tr> <td>9/8</td> <td>AC Circuits Power Supplies</td> <td>Blackburn: chapters 3, 4 Simpson: 11.8</td> <td>3.1, 4.2</td> </tr> <tr> <td>9/15</td> <td>Amplifiers</td> <td>Blackburn: chapter 5</td> <td>5.1</td> </tr> <tr> <td>9/22</td> <td>Amplifier Circuits</td> <td>Blackburn: chapter 6</td> <td>6.1</td> </tr> <tr> <td>9/29</td> <td>Logic Circuits Oscillators</td> <td>Blackburn: chapter 7</td> <td>7.1, 7.3, 7.4</td> </tr> </tbody> </table> | Week of | Lecture Slides (PDF) | Reading | Problems (from Blackburn) | 8/25 | DC Circuits Active Rectifiers | Blackburn : chapters 1, 2 Simpson: 4.11, 10.12-10.13 | 2.1, 2.2 | 8/25 | Labor Day, no lecture | | | 9/8 | AC Circuits Power Supplies | Blackburn: chapters 3, 4 Simpson: 11.8 | 3.1, 4.2 | 9/15 | Amplifiers | Blackburn: chapter 5 | 5.1 | 9/22 | Amplifier Circuits | Blackburn: chapter 6 | 6.1 | 9/29 | Logic Circuits Oscillators | Blackburn: chapter 7 | 7.1, 7.3, 7.4 |
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| 10/6 | Counters | Blackburn: chapter 16 | |
| 10/12 | Digital to Analog Analog to Digital | | 16.1 |
| 10/19 | Filter Circuits Active Filters | Blackburn: chapters 8, 17 | 8.2, 17.1 |
| 10/26 | Signal Interfaces Data Cables | Blackburn: chapter 18,19 | |
| 11/3 | Thermal Behavior Photosensors | Blackburn: chapter 9, 10 | |
| 11/9 | Hall Effect Strain Pressure | Blackburn: chapters 11, 12, 13 | |
| 11/16 | Motion Sensors | Blackburn: chapters 14, 15 | |
| 11/23 | | | |
| 11/30 | Exams | | |

last updated September 5, 2014