The proposed schedule is tentative. The topics and subtopics are guidelines and are not meant to be restrictive or all inclusive.

<table>
<thead>
<tr>
<th>Week</th>
<th>M W F</th>
<th>Topic</th>
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</table>
| 1    | 01-09-17| Course Introduction  
Review: Principles of DC Circuits  
myDAQ DC Current/Voltage Measurements (Series Resistors and Opens & Shorts)  
Grounding Schemes & Schematics |
| 2    | 01-16-17| **Monday - Martin Luther King Holiday - No Classes**  
01-18-17 | Review: Principles of Alternating Voltages and Currents  
myDAQ Current/Voltage Measurements (Parallel Resistors) |
| 3    | 01-23-17| Capacitor Characteristics  
Review: Power Supplies, Complex Impedance, Passive (RCL) Filters |
| 4    | 01-30-17| Generators, Motors, Servos, Stepper Motors  
PN Junctions and Semiconductors  
Diode Applications  
LEDs & Optoelectronics |

**Sunday 02-05-17 Last Day to Drop without Grade of "W"**

<table>
<thead>
<tr>
<th>Week</th>
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<th>Topic</th>
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<tr>
<td>5</td>
<td>02-06-17</td>
<td>Bipolar Junction Transistors (BJT)</td>
</tr>
</tbody>
</table>
| 6    | 02-13-17| Field Effect Transistors (FET)  
Principles of Small Signal BJT & FET Amplifiers |
| 7    | 02-15-17| Principles of Oscillators and Waveform Generators |

**Mid-Term Break February 27 - March 4, 2017**

<table>
<thead>
<tr>
<th>Week</th>
<th>M W F</th>
<th>Topic</th>
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| 8    | 03-06-17| Principles of Small Signal BJT & FET Amplifiers - revisited  
Positive Feedback (Principles of Oscillators - revisited)  
Negative Feedback |
| 9    | 03-13-17| Operational Amplifiers (Op-Amps)  
Negative Feedback and Op-Amp Characteristics |

**Sunday 03-19-17 Last Day to Drop with Grade of "W"**

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<thead>
<tr>
<th>Week</th>
<th>M W F</th>
<th>Topic</th>
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</table>
| 10   | 03-20-17| Op-Amp Applications  
Active Filters (Frequency Response) |
| 11   | 03-27-17| Op-Amp Applications - continued |
| 12   | 04-03-17| Digital Electronics and Integrated Circuits (IC’s)  
Large Signal / Non-Linear Amplifiers |
| 13   | 04-10-17| Digital Electronics and Integrated Circuits (IC’s) - continued  
Voltage Regulators, Switching Circuits, Multivibrators, Timers |
| 14   | 04-17-17| Introduction to Sensors and Microcontrollers  
Digital Circuits |

**Final Exam 12:30 - 2:30 PM, Wednesday, April 26, 2017**
List of Topics and Associated Tests

The topics and subtopics are guidelines and are not meant to be restrictive or all inclusive. A total of eight tests are tentatively scheduled. Depending on the flow of instruction and at the discretion of the course instructor, the number of tests may be modified by adding, combining, eliminating, and consolidating portions of the following topics and material.

Test #1
Electrical Standards & Conventions (Engineering Notation)
Decibels
DC Circuits - Ohm's Law (Current, Voltage, Resistance)
Series & Parallel Equivalent Circuits
Grounding Schemes & Schematics

Test #2
Voltage & Current Dividers
Thevenin & Norton Circuits
Transformers
RMS Voltages & Currents, AC Power Factor
Capacitor Characteristics
Complex Impedance (Capacitor, Inductor, Resistor Circuits)
RCL Circuits
  Transient Currents & Time Constants
  Steady State Voltages/Currents

Test #3
Generators, Motors, Servos, Stepper Motors
Semiconductors, Diodes, Optoelectronics

Test #4
Principles and Applications of Bipolar Junction Transistors (BJT)

Test #5
Principles and Applications of Field Effect Transistors (FET)

Test #6
Operational Amplifiers (Op-Amps)
Negative Feedback and Op-Amp Characteristics
Positive Feedback Applications

Test #7
Operational Amplifiers Applications
High & Low Pass Active Filters (Frequency Response)

Test #8
Digital Circuits & Integrated Circuits
Introduction to Sensors and Microcontrollers