**211 Schedule**

**This Schedule will be Periodically Updated… So Always Grab a Fresh Copy**

**01/21-Tu Lec1:** Intro, Syllabus, Adds/Roll, Supplies Overview **(Need ALL Supplies By Lec8)**
**Lab:** Talk About First Lab with Laptop & LTSpice For Next Class **(Bring Laptop w/ LTSpice Installed For Lab/Lec2 and Always Bring Laptop to Every Class )** Atomic Theory and Charged Bodies, Electroscope Demonstration

**01/23-Th Lec2: No Class, Instructor Absent (Medical Reason)**

**01/28-Tu Lec3:** Voltage, Current, Resistance, Ohms Law
**Lab:** Lab1 - Intro to LTSpice and Ohms Law (simulation)
**Lab 1 is Due by beginning of next class in Canvas. (Extended: Due by 2/04 9:29am latest)**

**01/30-Th Lec4:** Basic Units (Electrical Quantities and Metric Prefixes, Grob’s Pg.2), Power (Grob’s 3-7 to 3-9), Series Circuits, Resistance in Series, KVL (Grob’s 4-1 to 4-6)
**Lab:** Lab 2 – Series Circuits
**Lab 2 is Due by beginning of next class in Canvas**

**02/04 -Tu Lec5:** Series Circuits & KVL Voltage Drops Review, Parallel Circuits, Resistance in Parallel, KCL
**Lab:** Lab3 – Parallel Circuits **Lab 3 is Due by beginning of next class in Canvas**

**02/06 -Th Lec6:** Series-Parallel Combination Circuits
**Lab:** Lab 4 - Series Parallel Combination Circuits

**02/11 -Tu Lec7**: Shorts, Series Aiding/Opposing, Voltage Dividers **Lab:** Lab 4 - Series Parallel Combination Circuits
**Lab 4 is Due by beginning of next class in Canvas**

**02/13 -Th Lec8:** Series Parallel Combination Circuits Cont...
**Lab:** Lab 5 – Series Parallel Breadboarding & Prototyping. Begin with discussion about Development Methodology: Calculations -> Modeling (Verification) -> Prototyping (Validation). Start Lab today with Calculations and LTSpice Simulation.

**02/18 -Tu Lec8:** Superposition **Lab:** Lab 5 – Series Parallel Breadboarding & Prototyping. Resistor Codes, Multimeter/DMM Resistance Measuring, Manual vs Auto-Ranging Multimeters/DMM, Voltage/Current Probing & Measuring Techniques, Introduction to Benchtop Power Supply Usage, **Need all Supplies Today**

**02/20 -Th Lec9:** **No Class, Instructor Absent (Family Emergency)**

**02/25 -Tu Lec10:** Superposition Cont… and Midterm 1 Review **Lab:**  Lab 5 Cont…

**02/27 -Th Lec11: Midterm 1
Lab:**  No Lab Today

**03/04 -Tu Lec12:** Delta-Wye Conversions. **Lab:**  Lab 5 Cont…
**Lab 5 is Due by beginning of next class in Canvas**

**03/06 –Th Lec13:** Thevenin Equivalent Circuits
**Lab:** Start Lab 6 - Thevenin & Norton Equivalent Circuits

**03/11 -Tu Lect14:**  **No Class, Instructor Absent (Medical Reason)**

**03/13 -Th Lect15:** Another Thevenin Example, Current Sources, Norton Equivalent Circuits **Lab:** Lab 6 Cont…

**03/18 -Tu Lect16:** Source Transformation, Millman’s Theorem
**Lab:** Lab 6 Cont…
**Lab 6 is Due by beginning of next class in Canvas**

**03/20 -Th Lect17:** Using Millman’s Example, Direct Current vs Alternating Current, Vpk-pk, Vpk, VRMS, Sine and Square Waves, Frequency, Period, an d Amplitude.

**Lab:** Function Generators, Oscilloscope Usage, Probes & FG Cable Usage, Oscilloscope Grid/Division Measuring – Group Activity **(Important Activity: Please Don’t Miss and Make Sure to Bring All Supplies (FG Cable, OScope Probes, etc…)**

**03/25 -Tu Lect18:** Intro To Capacitance, Capacitance in Series/Parallel, Voltage Distribution
**Lab:** Continue Oscilloscope and Function Generator Practice, Continuous Time-Varying Signals, Period to/from Frequency Conversions

**03/27 -Th Lect19:** Universal Time Constant Chart, RC Time Constants
**Lab:** Lab 7 Start – RC Circuit Simulation

**03/31 - 04/04: Spring Break – No Class**

**04/08 -Tu Lect20:** RC Time Constants Epsilon Equation and Examples
**Lab:** Lab 7 Cont… Oscilloscope and Function Generator Experiment Setup and Begin Grid Measurements

**04/10 -Th Lect21:** Lab 7 Workshop – More Emphasis on Setup, Triggering, Measuring
**Lab:** Lab 7 Cont…

**04/15 -Tu Lect22:** Inductors and Inductance, Self-Inductance, Back-EMF, Units of Inductance, Inductance L/R Time Constant **Lab:** Lab 7 Cont… FG and Oscilloscope, Lab 7 - Cursor Measurements
**Lab 7 is Due by beginning of next class in Canvas**

**04/17 -Th Lect23:** Inductors L/R Time Constant, Universal Time Constant Chart and Epsilon Equations Examples
**Lab:** Lab 8 - Inductors L/R Time Constant

**04/22 -Tu Lec24:** Inductors, Midterm 2 Review
**Lab:** Lab 8 Cont…

**04/24 -Th Lec25:** **Midterm 2**
**Lab:** No Lab

**04/29 -Tu Lec26:** Mesh Analysis
**Lab:** Lab 8 Cont…
**Lab 8 is Due by beginning of next class in Canvas**

**05/01 -Th Lec27:**
**Lab:**

**05/06 -Th Lec28:**
**Lab:**

**05/08 -Th Lec29:** Last Day of Class
**Lab:**

**Monday May 12-Saturday, May 17 Finals Week**

-----------------------------------WORK IN PROGRESS BELOW-----------------------------------------

**11/5 -Tu Lect21:** Factors that affectInductance, Inductor Types, Energy Stored in Inductor, Inductance in Series/Parallel
**Lab:** Lab 8 - Inductors L/R Time Constant

**11/7 -Th Lect22:** Class Canceled
**Lab:** Class Canceled

**11/12 -Tu Lec23:** Capacitance,  **Lab:** Midterm 2 Review
**Lab 8 is Due by beginning of next class in Canvas**

**11/14 -Th Lec24:** Inductance, L/R Time Constants Epsilon Equations Examples
**Lab:** Midterm 2 Review

**11/21 -Th Lec26:** Mesh Analysis **Lab:**

**11/25 to 11/29 Holiday: Fall Break & Thanksgiving**

**12/03 -Tu Lec27:** Nodal Analysis **Lab:**

**12/05 -Th Lec28:** Transformers **Lab:**

**12/10 -Th Lec29:** Impedance **Lab:**

**LAST DAY OF INSTRUCTION (Academic Calendar):** Wednesday - 12/11/24

**FINALS WEEK:** Thursday 12/12/24 to Wednesday, 12/18/24