

**ELE220 Passive Circuits**  
**(3 Credits)**  
**Syllabus Fall 2021**

**Course Instructor:** Dr. A. J. Davis      [davis@ele.uri.edu](mailto:davis@ele.uri.edu)

**Office Hours:**            TBD (by appointment)

**Lecture:**                    Tu, Th            05:00-06:50    Woodward Hall 318  
(Note: No Final Exam)

**Required Text:**          Matthew Sadiku, *Fundamentals of Electric Circuits*, McGraw-Hill,  
7<sup>th</sup> Edition, 2021 ISBN: 978-1-260-22640-9.

**Pre-Requisite (min):** Received a passing grade in: PHY204.

**Description:** Electrical circuit laws & theorems, transient & steady-state analysis, frequency response, resonance. Diode and transistor circuits & op amps.

<b>Week</b>	<b>Topics</b>	<b>TB Chapter</b>
1	Course Overview; Current, Voltage, Power	1
2	Resistor, Ohm's Law, KVL, KCL	2
3	Bridge Circuits; Nodal & Mesh Analysis	2-3
4	Bipolar Junction Transistor (BJT) - DC Circuits Exam 1 (est)	3
5	Linearity & Superposition	4
6	Operational Amplifiers	5
7	Op Amp Circuits	
8	Exam 2 (est)	5
9	Capacitors & Inductors	6
10,11	Sinusoids & Phasors	9
12	Frequency Response	14
13	Exam 3	

**Grading:**

Exams	85%
Homework	15%