

ELE220 Passive Circuits
(3 Credits)
Syllabus Fall 2022

Course Instructor: Dr. A. J. Davis davis@ele.uri.edu

Office Hours: TBD (by appointment)

Lecture: Tu, Th 05:00-06:15 Washburn Hall 132
(Note: No Final Exam)

Required Text: Matthew Sadiku, *Fundamentals of Electric Circuits*, McGraw-Hill,
7th 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.

Week	Topics	TB Chapter
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%

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Course Policies:

- 1) Students must receive a passing grade in ALL listed pre-requisites: ELE212, ELE215, PHY204, MTH243, MTH362, ELE201 in order to be allowed to enroll (including minimum grade pre-requisites).
- 2) Attendance is mandatory for ALL class meetings.
- 3) Assignments must be submitted by the due date in order to receive credit.
- 4) Cell Phones and other Portable communication/electronic devices are to be disabled during class meetings.
- 5) EXAMS & Quizzes:
 - i) No course material will be allowed during the exams or quizzes. During the exam, the only materials permitted on the table top are the exam, paper supplied by instructor, writing instruments and a calculator.
 - ii) Students may not bring cell phones or portable communication devices. Operation of such devices during a quiz or exam will constitute grounds for failure.
 - iii) Calculators are to be used ONLY to perform basic arithmetic, trig. and log. functions.
 - v) Students must show all work in order to guarantee receiving full credit on a given problem (e.g. exams or quizzes). A correct answer without the written work leading to that answer will result in zero credit.
- 6) Students must receive a passing grade in each course element in order to pass this course.