Course Description
EE 4210 – EE Lab II

2000 – 02 Catalog Data: Experimental introduction to modulation, communication & IF transformers, transmission lines, waveguides and antenna measurements. Emphasis on laboratory investigation using specialized instrumentation. Prerequisites: EE 3210 and EE 3340 each with a grade of C or better, EE 3210 and EE 3340 may be taken currently with EE 4210.

Textbook: Lab manual

Course Outcomes: Students completing EE 4210 will be able to:
1. Measure oscillator performance
2. Measure amplifier noise
3. Measure BP & LP filter performance
4. Measure performance of Amplitude and frequency modulation and demodulation

Topics Covered:
1. Wien bridge oscillator
2. Amplifier noise
3. BP Filter
4. LP Filter
5. Frequency modulation
6. Amplitude modulation
7. Frequency demodulation
8. Amplitude demodulation
9. Frequency multiplication

Class Schedule: One hour lecture per week

Contribution to professional component:
EE 4210 is the second electronics lab, which builds on topics covered primarily in Electronics II course.

Relationship to Program Outcomes:
1. Have ability to apply knowledge of mathematics, science and engineering. Students use concepts from calculus and electronics. (Course outcome 2)

3. Have ability to design fundamental electronic circuits to meet desirable needs. Students have homework problems that incorporate
design issues. (Course outcome 1, 2, 3 & 4)

5. Have ability to identify, formulate and solve engineering problems. (Course Outcome 1, 2, 3, 4)

7. Have and ability to communicate affectivity. Students make lab reports of experiments conducted. They write a critique of a technical paper. (Course outcome 1, 2, 3, 4)

Course objective outcomes do relate to Program Outcomes 2, 4, 6, 8-11. They do correlate strongly with Educational Objective 1 (70%) and Educational Objective 2 (30%).

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