

ELEC 3060 Wireless Design Lab

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Lab: 368 Broun Hall

Website:

<http://www.eng.auburn.edu/users/wilsoc5/>

Class Meetings:

Tuesday 15:30 - 18:20
Thursday 15:30 - 18:20

Attendance:

Every class meeting has to be attended. Excuses should be sent with an email to the GTA before the meeting. If you miss a meeting, you will have to bring a **university approved excuse** in order to make-up an experiment, otherwise, you will be assigned a zero. A student who makes-up the experiment must submit an individual report for that week.

Meetings:

A brief explanation of the experiments will be given at the beginning of each class. *Each student will get a copy of the manual.* You are responsible for reading the manual of that week's experiments before coming to the meeting. The manuals will be posted at the website above. Instructors may ask questions or give a quiz to test you at the beginning of the meeting.

Format of Reports:

- Should be given as a **group report**.
- A **separate title page** is a must. This page should include all the names of the members of the group and the name and date of the experiment.
- The report should contain a short **introduction** about experimental objectives. The **body** of the report should contain collected data, calculations, observations, and answers to any specific questions asked by the instructor during the meetings. There should also be a short **conclusion**.
- **Neatness and proper language** are quite important. All **figures and tables** must have captions and explanations. Results do not mean anything without explanations and analysis.

Grading:

Reports:	30%	(same grade for all group members)
Lab Performance:	20%	(10% as a group, 10% as an individual) Criteria are: preparedness for lab meetings, answering questions during the meeting, and equal responsibility during the experiment.
Quizzes:	10%	There will be two comprehensive quizzes given during the semester. The questions will include basic theory and fundamental understanding of the objectives and results of the experiments.
Final Project:	40%	(20% technical, 20% presentation)

Students with disabilities:

Students with disabilities are encouraged to arrange a meeting with the instructor as soon as possible to discuss required accommodations.

Schedule:

Note: schedule is subject to change.

Week 1:	Jan 8 - Jan 10	No experiments
Week 2:	Jan 15 - Jan 17	Exp 1 - Modeling Equations Exp 2 - Double Sideband Suppressed Carrier (DSBSC) Generation
Week 3:	Jan 22 - Jan 24	Exp 3 - Amplitude Modulation and Envelopes
Week 4:	Jan 29 - Jan 31	Exp 4 - Sampling Theorem Exp 5 - Time Division Multiplexing (TDM)
Week 5:	Feb 5 - Feb 7	Exp 6 - Pseudo Random Binary Sequence (PRBS) Generation Exp 7 - Eye Patterns
Week 6:	Feb 12 - Feb 14	Exp 8 - Noisy Channel Model
Week 7:	Feb 19 - Feb 21	Exp 9 - Detection with the Decision Maker
Week 8:	Feb 26 - Feb 28	Exp 10 - Line Coding Exp 11 - Amplitude Shift Keying (ASK) Exp 12 - Binary Phase Shift Keying (BPSK)
Week 9:	Mar 4 - Mar 6	Exp 13 - Sampling with Sample and Hold Exp 14 - PCM Encoding and Decoding Exp 15 - Block Coding and Decoding
Week 10:	Mar 11 - Mar 13	Exp 16 - Bit Error Rate (BER) Measurement in the Noisy Channel
Week 11:	Mar 25 - Mar 27	Exp 17 - Bit Clock Regeneration
Week 12:	Apr 1 - Apr 3	Final Design Project
Week 13:	Apr 8 - Apr 10	Final Design Project
Week 14:	Apr 15 - Apr 17	Final Design Project
Week 15:	Apr 22 - Apr 24	Final Design Project Presentations