

INSTRUCTOR:

Dr. Lily Wang
200B PKI Building, 554-2065, lwang4@unl.edu
Office hours: Mondays 1 – 3 PM and by appointment

LECTURES:

MW 9-10:15 AM, PKI 387

PREREQUISITES:

AE 3300, Building Acoustic Fundamentals (or equivalent)

REQUIRED TEXTBOOK:

Audio Engineering for Sound Reinforcement – Eargle and Foreman (Hal Leonard, 2002)

COURSE WEBPAGE:

Login from <http://blackboard.unomaha.edu/> using your Lotus Notes username and password.

COURSE OBJECTIVES:

After completion of this course, you should have the following skills:

- Model transducers using electrical-mechanical-acoustical circuit analogies.
- Accurately calibrate and use typical electroacoustic equipment, including loudspeakers, microphones and accelerometers.
- Understand when sound reinforcement systems in rooms are applicable and design such systems.

TENTATIVE LECTURE TOPICS:

- I. Circuit analogies
- II. Transducer types
 - a. Electromagnetic-mechanical (dynamic/moving-coil)
 - b. Electrostatic-mechanical (condenser, electret)
- III. Electroacoustic equipment
 - a. Loudspeakers, microphones, amplifiers, cabling
 - b. Directivity patterns, directivity index and factor
 - c. Calibration techniques
- IV. Sound reinforcement system design
 - a. Speech intelligibility
 - b. Applications
 - c. Computer modeling and auralization
 - d. Electronic architecture

Electroacoustics – Syllabus

GRADING POLICIES:

The final grade for the class will be based on the following:

Homework	35%
Projects	30%
Midterm Exam	15%
Final Exam	20%
Total	100%

Final letter grades are assigned based on the system shown below:

98-100	A+
94-97	A
91-93	A-
88-90	B+
84-87	B
81-83	B-
78-80	C+
74-77	C
71-73	C-
68-70	D+
64-67	D
61-63	D-
0-60	F

You may view your grades for this course at any time on the course webpage!

HOMEWORK

- Homework assignments will be handed out in class, as well as posted on the web page.
- Homework must be turned in at the **beginning of class** on the due date.
- Late homework received between the beginning and end of class on the due date is penalized 10%.
- Late homework received between the end of class on the due date and the beginning of the next scheduled class is penalized 20%. After that, late homework will not be accepted, and the student will receive 0 on that assignment.

PROJECTS

- Project reports must be turned in at the **beginning of class** on the due date. **No late project reports will be accepted.**
- Details about the projects and report format will be provided at a later date.

POLICY ON ACADEMIC DISHONESTY:

Academic dishonesty, such as in the form of cheating or plagiarism, will be dealt with according to the rules and regulations set forth in the UNO Student Handbook. Please feel free to study and discuss class concepts with your other classmates, but **do not claim someone else's work as your own**. Any incident of academic dishonesty associated with this course will result in the student receiving an automatic grade of 'F' for the course.