

# Minnesota State University Moorhead

## PHYS 105: Physics of Music

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: 1

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: Goal 03 - Natural Science

Physical principles governing the production, transmission and reception of musical sound. A background in music is strongly recommended. Lab included. MnTC Goal 3.

**B. COURSE EFFECTIVE DATES:** 06/01/1995 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Musical scales.
2. Musical instruments.
3. Propagation of sound.
4. Physics of the ear.
5. Architectural acoustics.
6. Human voice.

### D. LEARNING OUTCOMES (General)

1. Students will demonstrate an ability to apply mathematics to answer questions about the physics of music.
2. Students will demonstrate an understanding of the scientific method.
3. Students will demonstrate an ability to apply concepts in a laboratory setting.

### E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

Goal 03 - Natural Science

1. Demonstrate understanding of scientific theories.
2. Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth, students' laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
3. Communicate their experimental findings, analyses, and interpretations both orally and in writing.

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

### G. SPECIAL INFORMATION

None noted