COURSE SYLLABUS

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Light and Sound For School Personnel Spring 2005 3 Credit Hours

Site: OFFC

1. Course Description:

Light and Sound For School Personnel will explore the optical principals of plane mirrors, curved mirrors, refraction, and lenses. Classical geometric optical analysis will be applied with basic mathematical models developed from experimental data. The study of wave behavior will connect light behavior to similar properties of sound. Experiments in both light and sound will utilize simple teacher-built equipment and sophisticated computer-aided instrumentation.

2. Learning Outcomes:

Students will develop a thorough understanding of the nature and behavior of light and sound.

Students will explore the nature of waves as related to both light and sound phenomena.

Students will learn instructional strategies including management of effective classroom discourse, design and use of student evaluation instruments, and appropriate use of technology in the classroom.

Students will explore the natural integration of mathematical and graphical analysis skills as the means of building mathematical models to describe phenomena.

3. Schedule of Required Readings:

No required readings as this is a laboratory investigations course.

4. Resources:

No text book will be used as this is a laboratory investigations course.

5. Evaluation:

Students will be evaluated in the following manner:

Assigned projects and practice - 50% of the grade
Tests and Quizzes - 50% of grade