

COLLIN COLLEGE

COURSE SYLLABUS

Course Information

Course Number: PHYS 1410

Course Title: Physics of Music and Sound

Course Description: This course is a study of the physics governing production, transmission and perception of sound. The focus is on the physical characteristics of sound, as well as the basic physical relationships that govern all vibrations and waves. We will also consider how sound is affected by the environment (acoustics) and how sound is physically and physiologically perceived. Laboratory exercises, classroom demonstrations combine to enhance lecture material. Lab required.

Course Credit Hours: 4

Lecture Hours: 3

Lab Hours: 3

Prerequisite: Meet TSI standard for MATH 0310, and TSI college-readiness standard for Reading; or equivalent

Student Learning Outcomes: Upon successful completion of this course, students should be able to do the following:

1. Answer questions involving the basic physics of vibration
2. Explain the relationship between vibration and wave motion
3. Explain the importance of the harmonic spectrum to sound quality
4. Answer questions involving the physical factors affecting room acoustics
5. Explain the process of sound production in each family of musical instruments (Critical Thinking and Communication Skills)
6. Explain the process of electronic sound production

Withdrawal Policy: See the current *Collin Registration Guide* for last day to withdraw.

Collin College Academic Policies: See the current *Collin Student Handbook*.

Americans with Disabilities Act Statement: Collin College will adhere to all applicable federal, state and local laws, regulations and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student's responsibility to contact the ACCESS office, SCC-D140 or 972.881.5898 (V/TTD: 972.881.5950) to arrange for appropriate accommodations. See the current *Collin Student Handbook* for additional information.