

## Music 150: Introduction to Musical Acoustics

### Website

<https://ccrma.stanford.edu/courses/150/>

**Class Time:** Mondays and Fridays, 3:30-4:50

**Class Location:** Knoll 217 (CCRMA 2<sup>nd</sup> Floor Classroom)

**Units:** 3 | UG Reqs: GER:DBEngrAppSci

### Professors:

[Tom Rossing](#) (rossing |at| ccrma)

Office hours: MW 9-9:30am, 11:30am-12pm; Tues, Thurs, Fri by appointment

Juan Sierra (JuanS |at| ccrma)

Office hours: TBD

### Catalog Description

The science of musical sound. Wave motion, perception of sound and music, loudness, pitch, and timbre, combination of tones and harmony. Science of musical instruments, speech and singing. Acoustics of rooms and concert halls. Prerequisites: some musical experience, understanding of basic algebra.

### Grading

10% Attendance and participation

30% Homework

25% Midterm exam (Fri 5/3/19 in class)

35% Final exam (Tue 6/11/19) TBD

*Students can add as much as 15% to their final grades by completing extra credit experiments, projects, or papers approved by the instructor.*

### Required Text (Available at the Stanford Bookstore)

*The Science of Sound* (3rd Edition)

Thomas D. Rossing, F. Richard Moore, and Paul A. Wheeler

Addison Wesley (2002)

### Optional Reading

*The Physics of Musical Instruments* (2nd Edition)

Neville H. Fletcher and Thomas D. Rossing

Springer (2008)

*Musical Instruments*

Donald M. Campbell, Clive A. Greated, and Arnold Myers

Oxford University Press, USA (2006)

Spring 2019

April 1, 2019

**Late Policy**

There are generally two problem sets due each week. All assignments should be turned in by **5pm** on the due date. Each student has **seven** late days to use at his or her discretion. Use of part of a day uses the entire day (e.g. turning in an assignment one hour late uses one late day). Once all late days are used, an assignment will be penalized ten percent of its total points each day it is late.

So that graded assignments can be returned in a timely manner, late assignments will **not** be accepted more than five days after the original due date (at 5pm), whether or not late days are used.

When submitting late assignments, whether or not you are using late days, write the date and time the assignment was submitted on the top of the first page (or email Juan once the assignment has been turned in). It is a violation of the Stanford Honor Code to write the wrong time and date.

**Students with Documented Disabilities**

Students who may need an academic accommodation based on the impact of a disability must initiate the request with the Student Disability Resource Center (SDRC) located within the Office of Accessible Education (OAE). SDRC staff will evaluate the request with required documentation, recommend reasonable accommodations, and prepare an *Accommodation Letter* for faculty dated in the current quarter in which the request is being made. Students should contact the SDRC as soon as possible since timely notice is needed to coordinate accommodations. The OAE is located at 563 Salvatierra Walk (phone: 723-1066).