

# *Physics 498 POM - Spring 2009*

## *Physics of Music and Musical Instruments*

### Personnel:

- Prof. Steven Errede (Lecturer) 435 Loomis 333-0074 [serrede@uiuc.edu](mailto:serrede@uiuc.edu)
- XXXX (HW/Lab TA) xxx Loomis-MRL Interpass xxx-yyyy [xxxx@uiuc.edu](mailto:xxxx@uiuc.edu)
- Jack Boparai (UG Lab Czar) 6101 ESB 333-2208 [jboparai@uiuc.edu](mailto:jboparai@uiuc.edu)
- UIUC Physics 498 POM Web Page: <http://online.physics.uiuc.edu/courses/phys498pom/>

### Course Space-Time Info:

- Lectures: Tues & Thurs, 1:00-2:30 pm – 6105 ESB
- A & B Labs: Fridays @ 11-2, 2-5 pm – 6105 ESB

### Course Content/Organization:

- Lectures – will cover acoustical physics, history & technology of music and musical instruments – all kinds, and the physics of human hearing/psychoacoustics.
- Labs – learn to use various electronic measurement equipment – digital recorders, microphones/sound transducers, oscilloscopes, function generators, digital multimeters, spectrum analyzers, lock-in amplifiers, power supplies, computer based data acquisition systems, electronics, etc. to carry out physical measurements/experiments to elucidate/learn about the physics nature of how musical instruments work.
- Homework: Short weekly exercises related to lectures, and possible use e.g. Excel or other software.
- Midterm & Final Exams.
- Students chose, and then carry out their own project(s) that they work on in lab during the semester – brief oral & short written presentation to class @ mid-term, and oral & written presentation(s) to class @ end of semester. Final report(s) posted on the UIUC Physics 498 POM web page.
- Final grade based primarily on homeworks, mid-term, final, oral presentation(s) & report(s) on project(s).