General Information (Preliminary)

PHYS 103: Physics of Music Laboratory

Fall 2018

Instructor: Dr. Andris Skuja
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Please make an appointment to see me. You may also drop by my office whenever you wish and if I am free I will see you.

TAs : Primary Instructor for your class

Your instructor in class will be a Teaching Assistant. To speak to a TA personally outside class please contact him by email and make an appointment.
The two TA's assigned for this course are
Shuyao Gu (sgu12@umd.edu)
Yingyue Zhu (yzhu18@umd.edu)

Class Schedule

All Sections meet in Room 3220 of the Physics Building

Section 101: Thursday 11:00am – 12:50 pm (TA: Shuyao Gu)
Section 301: Thursday 3:30pm – 5:20pm (TA: Yingyue Zhu)
Section 401: Friday 10:00am – 11:50am (TA: Shuyao Gu)
Section 501: Friday 12:00noon – 1:50pm (TA: Yingyue Zhu)
Section 601: Friday 2:00pm – 3:50pm (TA: Shuyao Gu)
Section 701: Wednesday 3:00pm – 4:50pm (TA: Yingyue Zhu)
Section 801: Wednesday 1:00pm – 2:50pm (TA: Yingyue Zhu)

Required Text

Physics 103 Laboratory Manual and Instruction Sheets
You will have to purchase online access to the Lab manual.
More details are provided below.
Additional Instruction Sheets may be provided on ELMS as needed
You will have to prepare a lab report online while you are performing your experiments. You must answer the pre-lab questions online before coming to class.

Course Overview: PHYS 103 PHYSICS OF MUSIC LABORATORY is a one (1)

credit hour course that should be taken concurrently with PHYSICS 102 PHYSICS OF MUSIC to receive credit, and may not be taken for credit by Physics Majors. The lab meets for two hours weekly, giving students hands-on in-depth experience with some of the topics covered in the Physics of Music lecture class.

The lab is a **participatory** activity, it is **mandatory** that you attend all labs. It is also important that you prepare for your lab period by carefully reading the lab instruction sheets and doing the pre-lab questions. Pre-lab questions serve both as a review of important ideas and preparation for lab activities. If you do not do the pre-lab questions online before you come to the lab, you will receive no credit for them. If you do not understand the questions or have difficulty completing the assignment you may ask for clarification. Lab reports are completed online in the lab. You can access the lab report template online in the Lab or download it to your laptop in advance.

You will carry out the lab with one or more lab partners. Discussion and cooperation with other students while doing the labs is encouraged. However, entry of observations and conclusions in the online Lab Report should be done by each student independently. Pre-lab questions should also be answered independently (after discussion when necessary). They pre-lab questions should be done online before coming to class.

Once you have completed your Lab Report you should post it on ELMS.

You will do each lab only once. **Additional credit** will **not** be given for repeating a lab.

If you **miss a lab**, your absence must be for a valid reason known as an excused absence. Please consult the following University website about missed classes:

http://www.ugst.umd.edu/courserelatedpolicies.html

If your absence is an excused absence you will be permitted to make up the missed lab without any loss of credit. You are encouraged to make up the missed lab by attending another lab session that week (at the discretion of the instructor) (see the lab schedule below). You may also make up the missed lab(s) by attending one or more of the lab sessions during make-up week as designated in the lab schedule. However, you shall get only half credit for any make-up labs which you missed during your regular lab sessions for unacceptable excuses. If you have to miss labs for religious reasons, you are encouraged to arrange for a make-up session before you miss the lab.

Grading will be based on the total point accumulation for the 11 labs, each lab being worth a maximum of 40 points. A histogram of total scores will be made, and a letter grade will be assigned approximately as follows from this distribution:

Top 20% - A; Next 40% - B; Next 30% - C; and the Bottom 10% - D or F

To qualify for an A, you must distinguish yourself among your peers. All these grade assignments are nominal and are based on previous experience of student participation in the course. In the unexpected circumstance that all students complete the labs with reasonable grades, failing letter grades will not be given.

It is mandatory to do all labs. Missing one lab will lower your grade by one letter grade; missing two labs will result in a D grade and missing more than two labs will result in a grade of F. If you miss a lab for any reason you must make it up as explained previously if you do not want to be penalized in the manner just described. Credit for make-up labs will be given as explained previously.

Lab Manual: You must purchase electronic access to the Experimental Instructions set. Access is available at

theexpertta.com

You can go to the site and register as well as login once you have done so.

You will have to enter an access code by your section number and follow instructions

The access codes are the ones starting with USH22MD below.

If you go to the link as posted below directly you will access the correct section corresponding to the appropriate code

0101	http://goeta.link/USH22MD-068435-1P7
0301	http://goeta.link/USH22MD-9E5AB6-1P6
0401	http://goeta.link/USH22MD-89C22D-1P5
0501	http://goeta.link/USH22MD-1B02A5-1P4
0601	http://goeta.link/USH22MD-E16D74-1P3
0701	http://goeta.link/USH22MD-49A1A5-1P2
0801	http://goeta.link/USH22MD-5FC277-1P1

Preparation for Lab #1: (a) Obtain your access, (b) Read the Introduction and the Lab #1 write-up and come prepared to ask questions if you do not understand the material, (c) Answer the pre-lab questions before coming to class

Schedule of Experiments:

Week	**Date**	**Experimental Topic**			Lab Rep
1	Aug. 29, 30 & 31	**No Lab.** First week of Classes			
2	Sept. 5, 6 & 7	**Experiment 1:** Simple Harmonic Motion			Due at end of session
3	Sept. 12, 13 & 14	**Experiment 2:** Introduction to Electronic Instruments			Due at end of session
4	Sept. 19, 20 & 21	**Experiment 3:** Sound Quality and Wave Shape			Due at end of session
5	Sept. 26, 27 & 28	**Experiment 4:** Speed of Sound in Air			Due at end of session
6	Oct. 3, 4 & 5	**Experiment 5:** Standing Waves in Stretched Strings			Due at end of Session
7	Oct. 10, 11 & 12	**Experiment 6**: Standing Waves in Air Columns			Due at end of Session
8	Oct. 17, 18 & 19	**Experiment 7:** Fourier Synthesis			Give to appropriate TA
9	Oct. 24, 25 & 26	**Experiment 8:** Fourier Analysis			Due at end of Session
10	Oct.31 & Nov 1 & 2	**Experiment 9**: Our Hearing Profiles			Due at end of Session
11	Nov. 7, 8 & 9	**Experiment 10:** Psychoacoustics			Due at end of Session
12	Nov. 14, 15 & 16	**Experiment 11:** Audio Equipment			Due at end of Session
13	Nov. 21, 22 & 23	**No Lab (Thanksgiving Week)**			
14	Nov. 28, 29 & 30	**Make up week. You must get Approval to do a make-up lab**			Due at end of session
15	Dec. 5, 6 & 7	No Labs. Special Consideration			
15	**Dec. 12, 13 & 14**	**Final Exam Week: No Labs**			

You must finish all 11 labs and hand in the corresponding reports to successfully complete the course for full credit

Academic Integrity : "The University of Maryland has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very

important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism." For more information on the Code of Academic Integrity or the Student Honor Council, please visit http://www.studenthonorcouncil.umd.edu/whatis.html.