PY 105

Lab 1: Collecting Data

Physics is a data driven science, that is why physics is so successful.

When teaching physics, in order to maximize learning outcomes of students, we (the instructor, and TFs) try to apply the same approach - which had been so successfully used for doing physics

– and for that we need data.

This exercise is designed for collecting data, which every student will be able to use for the following self-assessing activities. The analysis of the data will also help to adjust the course material and making it as productive as possible for the majority of students.

NO ***personal*** data will be extracted from these surveys, ALL information will be used ONLY in the aggregated format (i.e. *as a normalized distribution)*; your name will be used *only* for taking attendance (and for confirmation of the effort put into the work, to validate the grade for the IL1).

This is an individual exercise. Every student should use an individual computer and should not consult with anyone else.

Please, login into webassign.net (follow the instructions in the syllabus). You should see three short surveys/tests available for you; (a) FCI probes your current conceptual understanding of mechanical events; (b) MathSelfTest is designed to assess your mathematical skills; (c) a student status Pre-Survey (the history of taking math and physics, course expectations, etc.) presents a general social statistics of the student body.

Please, do the assignments in the following order (take short brakes when needed):

1. FCI (1 – 1.5 hours); 2. MathSelfTest (1 – 1.5 hours); 3. Pre-Survey (about 30 minutes)

The first two tests have some questions to which you *should not know* the answers (questions like that might comprise about one third of the all questions). For those questions you should provide your best guess ("trust your gut"). Some questions should be very obvious for you, in that case do not overthink the question, answer what first comes to mind, there are no tricks.

Please, apply your best effort (which is revealed via distinctive indicators, including timing, answers distribution, etc.), but do not spend on the two first tests more than an hour and a half per each test (1 - 3 minutes per a question/problem). The last survey should not take more than a half of an hour.

Please, note => **each question can be answered only ONCE**!! For each test you are given ONLY ONE submission for each question. After you submit your answer you cannot change it any more. It is useful to save your answers from time to time during the test (scroll down the page, click SUBMIT).

During each test *you will NOT know if your answer is correct or wrong*, you will NOT see the check mark (neither correct nor wrong; if on occasion a checkmark appears, just ignore it because it does not mean anything).

If you need to enter an answer with a decimal point, round it up up to four digits after the decimal point; you can also enter fractions in form nn/mm (for example if the result comes from calculating 10 divided by 3, you can write a fraction 10/3, or a decimal number 3.3333).

Please, keep in mind => each question can be answered only ONCE!! After you submit your answer you cannot change it any more. However, after the due day you will be able to see the answers to FCI and to MathSelfTest at www.learn.bu.edu.