

Instructions for the students

- Draw pictures so that you know how angles, *et cetera* were defined.
- Students (or the instructor) should disassemble each station after they are done.
- Use “random angles” for the force table. Discuss the friction problem. The (chrome) masses for the force table are pretty lousy: they should be weighed on the scale in the back.
- For the suspended bar, the bar itself contributes to the mass. Note the “center of mass” and “mass” labels on the bar. Make sure the bar is floating freely. Demonstrate the torque produced by the beam itself.
- For the suspended bar: Generally, students forget to include the mass and torque due to the bar itself (even if you mention this in the beginning of class). Remind lab groups as they are doing the experiment.

More notes

- For the balance beam, make sure that it is not upside-down.
- Generally, torques have not been introduced in lecture. You should have a wrench or similar prop and spend five minutes explaining what torque is.
- When signing notebooks, make sure students have the various forces and torques adding up to zero.
- The pulleys and masses for the round force table, the balance beam components, and the suspended bars and associated pulleys should all go in the same drawer, marked “pendulum rods.”