



5. In three quarters it is impossible to cover every topic in physics, so some topics need to be left out. The purpose of this question is to inform us of your priorities of the topics we might cover in the course. Below are the chapter headings from a typical textbook at this level. Currently about one week is spent on each chapter/topic. Each week consists of four lectures and a two-hour laboratory. Please indicate if you would prefer to see **more** time spent on a topic, **less** time spent on a topic, or about the **same** amount of time. Please remember that we have about 24 weeks total to spend, given a week of introduction and a week of review each quarter. Mark “more”, “less”, “same” or use + for more, = for same, - for less for each topic.

- Introduction to physics, units, significant figures
- Kinematics: Speed and Velocity
- Kinematics: Acceleration
- Newton's Three Laws: Momentum
- Dynamics: Force and Acceleration
- Equilibrium: Statics
- Gravity, According to Newton
- Rotational Motion
- Energy (mechanical energy, conservation)
- Solids (atoms, elasticity, moduli)
- Fluids (statics and dynamics)
- Oscillations and Waves (harmonic motion, mechanical waves)
- Sound (acoustics, Doppler effect, standing waves)
- Thermal Properties of Matter (temperature, expansion, gas laws)
- Heat and Thermal Energy (change of state, transfer of energy)
- Thermodynamics
- Electrostatics: Forces (electric force, electric field)
- Electrostatics: Energy (electric potential, capacitance)
- Direct Current
- Circuits
- Magnetism
- Electromagnetic Induction
- Alternating Current and Electronics
- Radiant Energy: Light (nature of light, spectra)
- The Propagation of Light: Scattering (reflection, refraction)
- Geometrical Optics and Instruments
- Physical Optics (polarization, interference, diffraction)
- Special Relativity
- The Origins of Modern Physics (sub-atomic particles, nuclear atom)
- The Evolution of Quantum Theory (blackbody radiation, atomic theory)
- Quantum Mechanics
- Nuclear Physics
- High-Energy Physics
- Other. Please specify.
- 24 Total number of weeks

★ Please place a star (\*) next to the FOUR chapters listed above that you consider to be the MOST IMPORTANT for your students.

6. The laboratory associated with this course is typically taught by graduate teaching assistants and could be structured in several ways. Please place an 'X' by that structure that you feel would be most appropriate for the students.
- A lab with well defined directions which verifies a physical principle previously explained to the students using the given apparatus.
  - A lab where the students are given a specific question or problem for which they must conduct an experiment with minimal guidance using the given apparatus.
  - A lab where the students are given a general concept from which they must formulate an experimental question, then design and conduct an experiment from a choice of apparatus.
  - Other. Please describe.
7. Would you please give examples of topics or subjects covered in your curriculum that assume some knowledge, skills or understanding which should be imparted by this physics course? Specific course numbers would also be helpful.

Thank you for completing this questionnaire. If you have any material which illustrates the topics or subjects covered in your curriculum which assume knowledge, skill, or understanding which should be imparted in Physics 1104-5-6/7-8-9, we would appreciate receiving a copy.

In order for us to ask you more detailed questions and consult with you as the need arises, we ask that you complete the following information. Thank you.

Name: \_\_\_\_\_

Department / program: \_\_\_\_\_

Campus address: \_\_\_\_\_

Campus phone: \_\_\_\_\_