Physics 507 Fall, 2010

## Information about you

General Information about you:
• Name:
• Office; Phone; Schedule: Please fill out other side.
• Student ID number:
• Field of Physics you want to pursue?
• Date you came to Rutgers:
• From/Degree:
Your mathematical background:
• Have you had a course in linear algebra?
• Have you had some exposure to advanced calculus, such as uniform convergence, differential forms,?
• Have you had some exposure to group theory? To abstract algebra?
• Have you had some exposure to differential geometry or analytical general relativity?
Your computer background:
• Favorite computer environment? email address?:
• How regularly do you read your email:
• Are you familiar with TeX/LaTeX?
• Do you know how to program? which high-level languages?
Your background in classical mechanics:
• At what level was the last course you had in classical mechanics? (if undergrad, which year?)
• What book did you use?
• Did you discuss Lagrangians and Lagrange's equations?
• Did you derive elliptical motion for the Kepler problem, the Newtonian gravity two-body system?

- Did you discuss rigid body motion including
  - 1. The moment of inertial as a tensor rather than a scalar?
  - 2. Euler's equations of rotational motion?
  - 3. Euler angles?
  - 4. Free motion of a rigid body when  $\vec{L}$  is not along a principal axis?
  - 5. The symmetric top, when  $\vec{L}$  is not along a principal axis?
- Did you cover a general approach to small oscillations with many degrees of freedom?
- Have you covered the mechanics of continuous media as partial differential equations?
- Have you had a thorough discussion of the kinematics of special relativity?

Other current courses: What other courses are you also taking?

501 503 511 601 617 other —  $\underline{\hspace{1cm}}$ 

Schedule:

