

## PHY820/422 Practice for the Final Exam

### **What will or will NOT be covered on the final exam:**

1. Basics of classical mechanics (stable/unstable equilibrium points, small oscillations around equilibrium, etc.)
2. Lagrangian (Noether's theorem is NOT covered)
3. Scattering (qualitative questions; Chaos is NOT covered)
4. Linear oscillations (Long or infinite chains are NOT covered)
5. Hamiltonian dynamics (Canonical transformations, Liouville's theorem, and adiabatic theorem are NOT covered)
6. There will NOT be any questions on Rigid Bodies and Continuum Dynamics.

**As a preparation for the final exam (subject exam for graduate students), you can use the following resources.**

- <https://www.pa.msu.edu/academics/graduate-program/current-graduate-students/practice-exams/>
- <http://www.pa.msu.edu/pumplin/tmp/subjexam2015.pdf>
- <http://www.pa.msu.edu/pumplin/tmp/subjexam2016.pdf>