Title: Classical Mechanics
Lecturer: Tolga Altinoluk
TA: Swaleha Mulani, Jyotismita Adhikary

Topics:
1. Newton's laws, vectors, coordinates
2. Conservation of momentum, angular momentum and energy
3. Oscillations
4. Variations and Lagrange Equations
5. Noether's Theorem
6. Two body problems
7. Noninertial Frames
8. Rigid bodies
9. Coupled oscillators
10. Hamiltonian mechanics
11. Special relativity

The recommended books are:
-"Classical Mechanics", J.R. Taylor
-"Introduction to classical mechanics", D. Morin
-"Classical Dynamics of Particles and Systems", S.Thornton, J.B.Marion
-”Classical Mechanics”, Landau, L. D.; Lifshitz, E. M.; Pitaevskii, L. P.

Rules:
Homework: 20%, Midterm exam: 30%, Final exam: 50%
Participation in lectures and problem-solving sessions is obligatory (you are allowed up to three absences).
You need to collect 60% of points to be admitted to the oral exam.
Oral exam: 3 questions from a list of topics

Test out exam:
This is a part of the block of Introductory courses, which are meant to assure that all of you, independent of your background, are at the level which is required from PhD student in physics. Certainly, some of you have already covered this material, and for such a case I am organizing the **test out exam** (end of March). Please contact the lecturer for a list of exemplary problems.