**PHYS 501, Fall 2013**

**Syllabus**

**Title of the Course:** Classical Mechanics

**Instructor:** Ali Mostafazadeh (Office: SCI-154; Office Hours: Mondays and Wednesdays 10:30-10:55 & 13:30-13:55)

**Main Textbook:** “Classical Dynamics,” J. V. Jose and E. J. Saletan (Cambridge University Press, 1998)

**Website:** Access[**http://home.ku.edu.tr/~amostafazadeh/**](http://home.ku.edu.tr/~amostafazadeh/) and follow the link [**Teaching**](http://home.ku.edu.tr/~amostafazadeh/teaching.htm) and then **Phys 501**.

**Topics to be covered**: Review of Newton’s formulation of Classical Mechanics (CM); Lagrangian formulation of CM, Scattering and small oscillations; Hamiltonian formulation of CM, Canonical transformations and Hamilton-Jacobi theory; Rigid body motion.

**Attendance:** Students are strongly advised to attend all the lectures. **5 bonus points** will be added to the total numerical grade (G) of those students who will miss at most 4 lectures.

**Evaluation method:** Students’ progress will be evaluated according to their performance in homework assignments (15%), two midterm exams (25% each), and a final exam (35%). To see the schedule for the exams see the website of Phys 501.

**Make-ups:** If a student misses a midterm exam and has a valid excuse, his (her) grade in the final exam will be substituted for the grade in the missed exam. If (s)he also misses the final exam, (s)he will be given zero in the exam(s) that (s)he has missed regardless of whether (s)he has a valid excuse or not. If a student misses the final exam and has a valid excuse, (s)he will be given a make-up exam. No late homeworks are accepted, but the contribution of the homeworks to the total grade will be computes after dropping the smallest two homework grades. Therefore, failing to hand in one or two homework papers will, in principle, not affect the student’s grade.

**Auditing Students:** In order to get an AU in this course, a student must not miss more than 4 lectures.

**Suggested Method of Study:** Students are advised to study the subjects covered in class immediately after the lectures. Reading the lecture notes and the book is necessary for grasping the subject, but it is by no means sufficient. Students must try to reproduce the results derived in class on their own. They are expected to spend an average of six hours per week on studying the material covered in class in addition to the time devoted to working out the homework problems.