

**HOWARD UNIVERSITY**  
**DEPARTMENT OF PHYSICS & ASTRONOMY**  
**PHYSICAL MECHANICS II**  
**PHYS 183 CRN: 16885**  
**SPRING 2019**

**M W F 1:10 – 2:00 PM TKH 103**

**INSTRUCTOR: Professor Prabhakar Misra OFFICE: TKH# 102**

**E-MAIL: [pmisra@howard.edu](mailto:pmisra@howard.edu) TEL: (202)806-6251 (Message/Voice Mail)**

**OFFICE HOURS: 2:10-3:00 PM M W and By Appointment**

**Text: “Classical Mechanics,” John R. Taylor, University Science Books, Mill Valley, California, 2005 Edition (ISBN: 978-1-891389-22-1).**

**SUBJECT MATTER**

Lagrange’s Equations

Two-Body Central Force Problems

Mechanics in Noninertial Frames

Rotational Motion of Rigid Bodies

Coupled Oscillations & Normal Modes

EXAM 1: 2/25

EXAM 2: 3/20

EXAM 3: 4/22

FINAL EXAM: 5/1

**WEEK(S) OF**

1/14, 1/23 & 1/28

2/4, 2/11 & 2/18

2/25, 3/ 4 & 3/18

3/25, 4/1 & 4/8

4/15 & 4/26

**Grading Scheme: Homework 20 %; Exams (1, 2 & 3) 50 %; Final Exam 30 %**

**Suggested Reading:**

1. “Mechanics,” Keith R. Symon, Addison-Wesley Publishing, Inc., 1971 (ISBN 13: 9780201073928).
2. “Introduction to Classical Mechanics: With Problems & Solutions,” David Morin, Cambridge University Press, Cambridge, 2008 (ISBN 978-0521876223).
3. “Problems and Solutions to Introductory Mechanics,” David Morin, Createspace Receiving, 2014 (ISBN 13: 9781482086928).
4. “An Introduction to Mechanics,” Daniel Kleppner & Robert Kolenkow, Cambridge University Press, Cambridge, 2014 (ISBN 978-0-52119811-0).

**ADA Disclaimer:**

Howard University is committed to providing an educational environment that is accessible to all students. In accordance with this policy, students in need of accommodations due to a disability should contact the Office of the Dean for Special Student Services for verification and determination of reasonable accommodations as soon as possible after admission to the University, or at the beginning of each semester.

**SPECIAL NOTE**

**“Only students whose names appear on the official course roster are permitted to attend classes. Students who are not registered are not permitted to attend or participate in course activities, do not have access to Blackboard, cannot submit course assignments, and will not receive a grade for this course. It is the students’ responsibility to ensure that they are properly registered by the published registration deadline. Requests to add courses after the deadline will not be considered. “**