

**Physics 499-150**  
**A Topical Introduction to Atomic Molecular and Optical Physics**  
**Fall 2010**

**Class Hours:** Wednesday 1:00-1:50 PM and Thursday 2:00 -3:40 PM

**Start date:** September 8, 2010.

**Room:** 2250 Computer and Space Science Building

**Instructor:** Luis A. Orozco, Dept of Physics, CSS 2203, 5-9740, [lorozco@umd.edu](mailto:lorozco@umd.edu)

**Course Description:**

This course is an introduction to Atomic Molecular and Optical Physics, with a topical emphasis on modern developments on the field, such as precision spectroscopy, trapping and cooling of atoms, ultra-cold gases, and frequency metrology.

**Prerequisites:**

First course of Quantum Mechanics PHY 401 or approval of the instructor.

**Textbook:** There will be no required textbook.

**Course Objectives and expected outcomes:**

The purpose of this course is to expose students to aspects of modern research in Atomic Molecular and Optical Physics.– it is not to be a complete survey of either field, but will instead cover selected topics and methods. The format will be lecture-based, with some homework and practice in reading, evaluating and writing scientific papers, and emphasis on design of precision measurements and null tests.

**Grading Scheme:**

Writing assignments and oral presentations:	60%
Class participation:	40%