Meeting Time and Place:
Lecture: MoWeFr. 10:00-10:53 P-124
Instructor:
Prof. Dominik Schneble
A-106 Office hours: tba

Topics
atomic structure, interaction of atoms with static electric and magnetic fields; interaction with oscillating fields - atomic resonance, Bloch-sphere and dressed-state picture; mechanical effects of laser light; basics and some applications of atom cooling and trapping, and atomic quantum gases.

Textbooks
None required - lecture notes with chapter references to recommended textbooks will be provided as the course proceeds.

Grading
PHY451: biweekly homework (60%), midterm (15%) & final (25%) exam
PHY565: biweekly homework (45%), midterm (15%) & final (25%) exam; term paper (15%)

Learning Outcomes
Students who completed this course should have a thorough understanding of basic phenomena in AMO physics, should be able to describe these phenomena based on quantum mechanics and electrodynamics, and should be able to make quantitative estimates for them.

Academic Integrity
Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Any suspected instance of academic dishonesty will be reported to the Academic Judiciary. For more comprehensive information on academic integrity, including categories of academic dishonesty, please refer to the Academic Judiciary website at http://www.stonybrook.edu/uaa/academicjudiciary/

Electronic Communication
Email to your University email account is an important way of communicating with you for this course. For most students the email address is firstname.lastname@stonybrook.edu, and the account can be accessed here: http://www.stonybrook.edu/mycloud. It is your responsibility to read your email received at this account. For instructions about how to verify your University email address see this: http://it.stonybrook.edu/help/kb/checking-or-changing-your-mail-forwarding-address-in-the-apo. You can set up email forwarding using instructions here: http://it.stonybrook.edu/help/kb/setting-up-mail-forwarding-in-google-mail. If you choose to forward your University email to another account, we are not responsible for any undeliverable messages.

Religious Observances
See the policy statement regarding religious holidays at http://www.stonybrook.edu/registrars/forms/RelHoPol%20081612%20cr.pdf. Students are expected to notify the course professors by email of their intention to take time out for religious observance. This should be done as soon as possible but definitely before the end of the 'add/drop' period. At that time they can discuss with the instructor(s) how they will be able to make up the work covered.

Disabilities
If you have a physical, psychiatric/emotional, medical or learning disability that may impact on your ability to carry out assigned course work, you should contact the staff in the Disability Support Services office (DSS), 632-6748/9. DSS will review your concerns and determine, with you, what accommodations are necessary and appropriate. All information and documentation of disability is confidential. Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Disability Support Services. For procedures and information go to the website http://www.sunysb.edu/ehs/fire/disabilities.shtml

Critical Incident Management
Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report the University Police and the Office of University Community Standards any serious disruptive behavior that interrupts teaching, compromises the safety of the
learning environment, and/or inhibits students' ability to learn. See more here: http://www.stonybrook.edu/eb/behavior.shtml
1/27/2014