PHYS5317 - Atoms, Molecules and Solids I

PHYS 5317 Atoms, Molecules and Solids I (3 semester hours) Core course for Applied Physics Concentration. Fundamental physical description of microsystems starting with the need for quantum mechanics and proceeding through the application of quantum mechanics to atomic systems. Emphasis will be on a physical understanding of the principles which apply to technologically important devices. Computer simulations will be used to focus the student on the important physical principals and not on detailed exact solutions to differential equations. Topics covered include: justification for quantum mechanics, application of quantum mechanics to one-electron problems, application to multi-electron problems in atomic systems. Prerequisites: MATH 2451, PHYS 2325 and PHYS 2326 or PHYS 2327. (3-0) Y (2016-02-05 22:17:40)