ECE491 Introduction to Nanotechnology

(Department of Electrical and Computer Engineering—Fall, 2011)

Schedule 100 LH, 11am~12:15pm, Tuesday and Thursday (08/23/2011~12/01/2011)

Course website http://www.ece.uic.edu/~zyang/Teaching/index.html

Instructor Dr. Zheng Yang (yangzhen@uic.edu)

Office hours ERF 3017, 1:30pm~3pm, Tuesday (08/23/2011~11/29/2011).

Prerequisite EE346 & EE448 or instructor’s consent

Descriptions ECE491 is a “seminar” style course. In the course, the state-of-the-art research progress in kinds of nanotechnology topics is presented in the seminars by the instructor and invited speakers; background fundamental knowledge that helps the students understand “nano” as well as general preparation, characterization, and fabrication approaches for nano-materials and nano-devices are presented in the lectures.

Reference book


Reference books for quantum mechanics, solid-state physics, and semiconductor physics and devices.

D. J. Griffiths, “Introduction to quantum mechanics (2nd)”, Prentice Hall, 2005


Homework Three home-projects (HPs) are assigned on 09/13/2011, 10/11/2011, and 11/08/2011; due on 10/04/2011, 11/01/2011, and 11/29/2011, respectively. No makeup after due! The HPs are reviews and highlights of the most important lecture contents, which are useful for students consolidating the knowledge learned from lectures and understanding the research topics discussed on the seminars.

Grading Each student need to present an oral presentation near the end of the semester. The oral presentation is of 30 minutes plus 5 minutes for questions; and to complete a research report by the end of the semester. The topics of the oral presentation and research report are chosen by the students themselves under the scope of nanotechnology research area. The grading is based on three HPs (15%×3=45%), the oral presentation (25%), and the research report (30%).