Tentative Syllabus for Physics 597

Nanotechnology

Spring 2013

Description: Physics of miniaturization, laws of physics governing the devices at the nano-scale

Textbook: Nanotechnology -- Understanding Small Systems
Second Edition
Ben Rogers, Sumita Pennathur, and Jesse Adams
CRC Press, 2011
ISBN 978-1-4398-4920-0

Lecture Time and Place: MW 6:00 - 7:15 PM Room STC-114

Instructor: Dr. A. R. Chourasia
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Office Hours: 2 – 4 pm OR by appointment

Goals of the Course: Students will gain qualitative knowledge of the physics Of miniaturization, the interacting systems at the nano-scale, the scaling laws, mechanics at the nano-scale, and the functioning of electronic devices at the nano-scale.
The students will also gain knowledge on the experimentation of nanomaterials with respect to the forces and surface topography

Grading Procedure and Scale:

The lecture portion of the grade is determined from homework, exams, a project, and the final exam as outlined below.

*	Homework and attendance (Late Homework penalty 10% each day)	20 %
*	Mid-Term Exam	25 %
*	Final exam (comprehensive)	35 %
*	Project	20 %

90 and above:	A
80 and above but less than 90:	B
70 and above but less than 80:	C
60 and above but less than 70:	D
Less than 60:	F

Missing an exam without first making arrangements for make-up with the instructor (excused absence cleared before the exam) will automatically consume the failing grade. Missing other class periods will result in penalties as described under the attendance section below.

Any decision to curve the grade will be taken at the end of the semester
Five unexcused absences will automatically result in a failing grade

<u>Lecture and Test</u> (Tentative)

Chapter 1	Big Picture and Principles of the Small World
Chapter 2	Introduction to Miniaturization
Chapter 3	Introduction to Nanoscale Physics
Chapter 4	Nanomaterials
Chapter 5	Nanomechanics
Chapter 6	Nanoelectronics

Final Exam is on Monday, May 6 at 6:00 pm

Attendance and Tardiness: Students are expected to be on time and present for all class meetings. Excused absences can be arranged prior to the class period being missed for appropriate activities as determined by the instructor. If an emergency results in an absence, the student should contact the instructor as soon as possible informing the instructor of the emergency and inquiring about ways to make up the missed class. The instructor will make judgements on how to handle the situation. Possible reasons for an excused absence are listed in the " Student's Guidebook" under class attendance policy. Attendance and tardy records will be maintained and both may result in deductions from your overall grade.

Classroom Behavior: Disorderly conduct which interferes with the normal classroom atmosphere will not be tolerated. The classroom instructor is the judge of such behavior and may instruct a disorderly student to leave the room with an unexcused absence or in more serious situations a student may be removed from the class with a failing grade.

Cheating and other Breaches of Academic Conduct: Academic cheating, plagiarism, and other forms of academic misconduct may result in removal of the student from class with a failing grade or may in extreme cases result in suspension or expulsion from the University as described in the "Code of Student Conduct" section of the " Student's Guidebook".

Students with Disabilities: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services
Texas A&M University-Commerce
Gee Library
Room 132
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
StudentDisabilityServices@tamu-commerce.edu

Evaluation of Instruction: Students will be given opportunities to evaluate instruction near the end of the semester. The physics department utilizes a scantron graded questionnaire with statements regarding various elements of instruction and in addition utilizes an open ended form where students can make comments on all elements of the classroom. These comments are given to the instructor and department head soon after the grades are recorded. If students have concerns about the classroom experience during the semester they should inform the instructor of those concerns and failing a satisfactory response may, as a last resort, contact the physics department head with those concerns.