

**The University of Texas at Tyler**  
**Syllabus**  
**Spring 2009**  
**Physics 4340**  
**Section 1**

**Instructor:** Dr. Randy Back

**Class Room:** RBN 4034

**Class Time:** MWF 12-12:50

**Office:** RBN 4047

**Phone:** (903) 565-5797

**Email:** RBack@uttyler.edu

**Office Hours:** Monday 10-12; Wednesday 10-11; Thursday 12-2; Friday 10-12. You should feel free to stop by my office any time. If I am available I will be happy to help you.

**Course Topics:** This course will introduce the student to some basic concepts and principles of modern physics. This will include special relativity, general relativity, quantum mechanics and its applications.

**Text:** *Modern Physics* by Randy Harris, 2<sup>nd</sup> edition.

**Prerequisite:** MATH 3404

**Homework:** Homework will be assigned after each class and it will be due the following class. Homework will be given in class or on the University blackboard system. Homework is essential to understanding the material and doing well on the tests.

**Quizzes:** Quizzes will be given frequently throughout the semester.

**Tests:** There will be three tests given throughout the semester. The first test will be given when we finish the section on relativity. The second test will be on quantum mechanics and the third test will cover applications of quantum mechanics. The test dates will depend on how fast we cover the material.

**Final Exam:** The final will cover material from the entire semester.

**Make-up:** No late work will be accepted. If you have an excused absence you must make up the work before the due date. You may substitute your grade on the final for one of the semester tests.

**Grading:** Each homework assignment will count for a maximum 5 point. Each quiz will count for a maximum of 5 points. Each test will count for a maximum of 100 points. The final counts for a maximum of 150 points. At the end of the semester all of your points will be totaled and divided by the maximum possible. A(90%-100%), B(80%-89%), C(70%-79%), D(60%-69%), F(<60%).

**Disability Statement:** "If you have a disability, including a learning disability, for which you request disability support services/accommodation(s), please contact Ida MacDonald in the Disability Support Services office so that the appropriate arrangements may be made. In accordance with federal law, a student requesting disability support services/accommodation(s) must provide appropriate documentation of his/her disability to the Disability Support Services counselor. In order to assure approved services the first week of class, diagnostic, prognostic, and prescriptive information should be received 30 days prior to the beginning of the semester services are requested. For more information, call or visit the Student Services Center located in the University Center, Room 282. The telephone number is 566-7079 (TDD 565-5579)." Additional information may also be obtained at the following UT Tyler Web address: <http://www.uttyler.edu/disabilityservices>.

**Social Security Statement:** It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. The University has changed its computer programming so that all students have an identification number.

**Note Regarding Student Absence due to Religious Observance:** Students who anticipate being absent from class due to a religious observance are requested to inform the instructor by the second class meeting of such absences.

### **Grade Replacement**

If you are repeating this course for a grade replacement, you must file an intent to receive grade forgiveness with the registrar by the Census date. Failure to file an intent to use grade forgiveness will result in both the original and repeated grade being used to calculate your overall grade point average. A student will receive grade forgiveness (grade replacement) for only three (undergraduate student) or two (graduate student) course repeats during his/her career at UT Tyler. (2006-08 Catalog, p.35)

### **Student Academic Conduct**

In this course students are encouraged to work in groups when doing homework and preparing for quizzes and tests. However, during quizzes and examinations a code of honor will apply under which students are to work alone and neither give help to others nor receive help from any sources. Cheating will not be tolerated.

### **Course Objectives/Student Learning Outcomes**

1. State the difference between classical and modern physics.
2. Apply your mathematical knowledge to analyze physical situations.
3. To appropriately reason, synthesize knowledge, and/or evaluate sources of information necessary to solve problems.
4. Predict reasonable solutions to problems based on an understanding of modern physics principles.

### **General Course Information**

1. You are responsible for all the material covered in class. You are also responsible for the material in each chapter we cover, even if it is not explicitly covered in class.
2. Physics builds on itself. It is very important that you do not fall behind on the material.
3. You should read each chapter before we cover the material in class.
4. It is very important that you spend time outside class reading the book and doing the homework. The only way you will understand the material is to spend time working the problems.
5. I strongly encourage you to ask questions in class and come by my office any time you need help with physics.
6. Regular classroom attendance is expected.