PHYS1441-003: GENERAL COLLEGE PHYSICS I
Spring 2015

Instructor: Mingwu Jin, Ph.D.

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Office Hours: Tuesday and Thursday 1:30-2:30PM or by appointment

Section Information: PHYS1441-003

Time and Place of Class Meetings: PKH204, Tuesday and Thursday 11:00AM-12:20PM.

Description of Course Content: The first half of a one-year, non-calculus introductory physics course taken by pre-medical, pre-dental, biology and architectural majors and others. The study of mechanics, elasticity, fluids, heat and waves is supplemented by laboratory experiments.
This course will cover the following topics:
Measurement and Estimating, Kinematics, Vectors, Newton's Laws – Chapters 1-4
Circular Motion, Gravitation, Work and Energy, Momentum, Rotation Motion – Chapters 5-8
Static Equilibrium, Fluids, Waves, Thermal Physics - Chapters 9-11, 13

Student Learning Outcomes: Students understand fundamental principles and laws of classic mechanics and use them to solve mechanical problems algebraically. Furthermore, students can understand phenomena in their fields related to classic mechanics and will be able to apply these concepts and algebra/trigonometry to analyze real problems in their field and to synthesize and evaluate solutions.

Required Textbooks and Other Course Materials: Physics: Principles with Applications, Vol 1, Douglas C. Giancoli, 7th edition, with access to www.masteringphysics.com.
If you buy your textbook at the bookstore, make sure you get the version that comes with access to a course website at www.masteringphysics.com. Otherwise you can buy access at masteringphysics.com. You need to go there and register for class with **course ID "JINPHYS1441S15"**. Please make sure to use **your student ID (starting with 1000)** and **name** to register. All course related materials including homework assignments, tutorials, and lecture notes will be managed at the course website. Thus, **the access to www.masteringphysics.com is mandatory for this section of PHYS1441.**

Descriptions of major assignments and examinations: 12 online homework assignments (250 points in total), 3 online tutorials (50 points in total), and 3 in-class exams (100 points each) (First Midterm: tentatively Feb. 24; Second Midterm: tentatively Apr. 07; Final: May 12). For the lab assignments and exams, please refer to the lab syllabus (http://www.uta.edu/physics/labs/index.html) and contact Dr. Shree K Bhattarai at shree.bhattarai@uta.edu.

Other Requirements: Familiarity with high school algebra and trigonometry is required. You must enroll in and pass a relevant lab section, unless exempt.

Attendance: At The University of Texas at Arlington, taking attendance is not required. Rather, each faculty member is free to develop his or her own methods of evaluating students' academic performance, which includes establishing course-specific policies on attendance. As the instructor of this section, I have decided that attendance at class meetings is NOT REQUIRED but STRONGLY ENCOURAGED.

Attending the lectures can lead to more efficient learning. Answers to conceptual questions will be taught in class only, but will **NOT** be provided in online lecture notes.

Grading: **The grade will be divided into the following 4 parts as 100% regular credit (a-c) and 10% extra credit (d). The total is 110% including the extra credit.**
(a) Twelve homework assignments (250 homework points) – 25% credit
(b) Three Exams (100 exam points for each exam) – 60% credit: 2 midterms (10% credit each) and 1 final COMPREHENSIVE exam (40% credit).
(c) Lab (100 lab points) – 15% credit
(d) Extra credit for three online tutorials (50 tutorial points) – 10% extra credit. To qualify for extra credit, none-zero score of all exams is required.

The credit from each category can be calculated from the credit worth of that category and your score in that category. For example, if you score 200 points out of total 250 homework points, your credit from homework will be 25%×200/250=20%.

The final numeric grade will be the sum of credits of all categories.

Final letter grade: A≥90%, 80%≤B<90%, 70%≤C<80%, 60%≤D<70%, and F<60%.

If you fail the lab and your final numeric grade≥60%, your letter grade will be incomplete (I). You have to retake and pass the lab in order to get the credit of this class.

Students are expected to keep track of their performance throughout the semester and seek guidance from available sources (including the instructor) if their performance drops below satisfactory levels.

Expectations for Out-of-Class Study: Beyond the time required to attend each class meeting, students enrolled in this course should expect to spend at least an additional 5-10 hours per week of their own time in course-related activities, including reading the textbook, understanding course lectures, completing assignments, and preparing for exams, etc.

Make-up Exams: **No make-up exam allowed** unless legitimate reasons are provided in advance.

Grade Grievances: Any appeal of a grade in this course must follow the procedures and deadlines for grade-related grievances as published in the current undergraduate catalog.

Drop Policy: Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. **Students will not be automatically dropped for non-attendance**. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (http://wweb.uta.edu/ses/fao).

Americans with Disabilities Act: The University of Texas at Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including the *Americans with Disabilities Act (ADA)*. All instructors at UT Arlington are required by law to provide "reasonable accommodations" to students with disabilities, so as not to discriminate on the basis of that disability. Any student requiring an accommodation for this course must provide the instructor with official documentation in the form of a letter certified by the staff in the Office for Students with Disabilities, University Hall 102. Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.

Title IX: The University of Texas at Arlington is committed to upholding U.S. Federal Law "Title IX" such that no member of the UT Arlington community shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity. For more information, visit www.uta.edu/titleIX.

Academic Integrity: All students enrolled in this course are expected to adhere to the UT Arlington Honor Code:

I pledge, on my honor, to uphold UT Arlington's tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.

I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

Instructors may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System *Regents' Rule* 50101, §2.2, suspected violations of university's standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student's suspension or expulsion from the University.

Student Support Services: UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may contact the Maverick Resource Hotline by calling 817-272-6107, sending a message to resources@uta.edu, or visiting www.uta.edu/resources.

Lab Safety Training: Please contact Dr. Shree K Bhattarai at shree.bhattarai@uta.edu for the requirement.

Electronic Communication: UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at http://www.uta.edu/oit/cs/email/mavmail.php.

Student Feedback Survey: At the end of each term, students enrolled in classes categorized as lecture, seminar, or laboratory shall be directed to complete a Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student's feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington's effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit http://www.uta.edu/sfs.

Final Review Week: A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week *unless specified in the class syllabus*. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition,

no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

Emergency Exit Procedures: Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit, which is located in the one o'clock direction of the east door of the classroom and right cross the hallway. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist handicapped individuals.

Course Schedule

Jan 20-Feb 19	Chap 1 Introduction (2 lectures), Chap 2 1D kinematics (2 lectures), Chap 3 2D kinematics (2 lectures), and Chap 4 Newton's laws (3 lectures)
Feb 24	**Midterm Exam #1 (11AM-12PM)**
Feb 26-Apr 02 (Mar 9-13 Spring Break)	Chap 5 Circular motion (2 lectures), Chap 6 Work and energy (2 lectures), and Chap 7 Linear momentum (2 lectures), Chap 8 Rotational motion (2 lectures)
Apr 07	**Midterm Exam #2 (11AM-12PM)**
Apr 09-May 07	Chap 9 Static equilibrium (2 lectures), Chap 10 Fluid (2 lectures), Chap 11 Vibrations and waves (3 lectures), and Chap 13 Temperature and kinetic theory (2 lectures)
May 12	**Final Exam (11AM-1PM)**

As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course. –Dr. Mingwu Jin

For the lab schedule, please refer to the lab syllabus (http://www.uta.edu/physics/labs/index.html).
For questions related to the lab, please contact Dr. Shree K Bhattarai at shree.bhattarai@uta.edu.

Emergency Phone Numbers: In case of an on-campus emergency, call the UT Arlington Police Department at **817-272-3003** (non-campus phone), **2-3003** (campus phone). You may also dial 911.