COURSE: Physics 4423, Classical Mechanics II

MEETING TIME & PLACE: Tues. - Thurs. 9:00 - 10:15 am, PS 112

INSTRUCTOR: Dr. James P. Wicksted

OFFICE: PS 232, phone: 744-5807

EMAIL: james.wicksted@okstate.edu

WEB PAGE ADDRESS: http://physics.okstate.edu/wicksted/courses/4423/2014/index.html

OFFICE HOURS: Tues. 1:30 pm - 3:00 pm, or by appointment


PREREQUISITE: Physics 3013 (Classical Mechanics I)

HOMEWORK: Weekly homework assignments will be given. Due dates will be announced in class. The homework assignments are an essential part of this course. By doing the homework, you will develop the problem solving skills needed for success in the exams, and obtain a more complete understanding of the material.

EXAMS: There will be two in-class exams and a comprehensive final exam. The dates and times of the in-class exams will be announced in class. The final exam is scheduled for Tuesday, December 9, from 8:00 to 9:50 am. No make-up exams will be given unless a bonafide excuse is provided (e.g., due to sickness, a note from your doctor will be required).

ATTENDANCE: You are expected to attend each lecture. If you miss a lecture, it is your responsibility to find out what was covered and what information was given by the instructor.
COURSE DESCRIPTION: This is the second semester of a two-semester course in classical mechanics at the advanced undergraduate/first year graduate level. It is assumed that you will have successfully completed a semester of junior/senior level mechanics, such as PHYSC 3013. Mathematics prerequisites include differential equations and linear algebra.

Tentative Schedule

<table>
<thead>
<tr>
<th>Topic</th>
<th>Chapter</th>
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<tbody>
<tr>
<td>Constrained Systems – Method of Undetermined Multipliers</td>
<td>Chap. 6</td>
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<tr>
<td>Some Methods in the Calculus of Variations</td>
<td>Chap. 6</td>
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<td>Hamilton’s Principle – Lagrangian and Hamiltonian Dynamics</td>
<td>Chap. 7</td>
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<td>Coupled Oscillations</td>
<td>Chap. 12</td>
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<tr>
<td>Special Theory of Relativity</td>
<td>Chap. 14</td>
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GRADING: Grades will be determined on the basis of 100 points apportioned as follows:

- Homework: 25
- In-Class Exam I: 20
- In-Class Exam II: 20
- Final Exam: 30

The remaining 5 points will be distributed according to how I judge your classroom participation. This will be based upon your understanding of the material during class discussions (e.g., your questions and comments, your response to my questions in class, etc.).

The tentative grading scale will be:

- A ≥ 85 > B ≥ 75 > C ≥ 60 > D ≥ 50 > F

OSU Class Policies: University policies regarding cheating, drop/add, withdrawals, and special accommodations for students with disabilities will be followed. More details on these can be found on the attached copy of the OSU Syllabus Attachment for the Fall 2014 semester.
OKLAHOMA STATE UNIVERSITY
SYLLABUS ATTACHMENT
Fall 2014

http://academicaffairs.okstate.edu/faculty-a-staff

YOUR SUCCESS AS A STUDENT IS OUR TOP PRIORITY.
THIS INFORMATION IS PROVIDED TO ANSWER QUESTIONS MOST OFTEN ASKED BY STUDENTS.

IMPORTANT DATES
Last day to add a class (without instructor permission) 8/25/2014
Last day to drop a course with no grade and 100% refund 8/25/2014
Last day to add a class (requires instructor & advisor permission) 8/29/2014
Last day to drop a course or withdraw from the University with an automatic “W” and receive a partial refund (requires advisor signature) 8/29/2014
Last day to post 6 week grades 9/30/2014
Last day to file diploma application (for name to appear in Fall Commencement program) 11/3/2014
Last day to drop a class or withdraw from the University with an automatic “W” 11/7/2014
Last day to withdraw from all OSU classes with an assigned grade of “W” or “F” 11/21/2014
Pre-Finals week 12/1 – 12/5/2014
Final examinations 12/8 – 12/12/2014

Note: Outreach, Internet, and short courses have unique drop/add and refund deadlines; lookup the specific deadlines for these courses on the Short, Internet and Outreach Class Schedules page of the Registrar’s website.

Fall Semester Holidays
University Holiday 9/1/2014
Students’ Fall Break 10/24/2014
First day of students’ Thanksgiving break (no classes) 11/26/2014
University Holiday 11/27 – 11/28/2014

DROPPING A COURSE AND WITHDRAWING FROM THE UNIVERSITY, students often confuse these terms.

Dropping a Course (or courses) may occur during the first twelve weeks of the semester. This means, however, that you are still enrolled in at least one other OSU course. Exceptions to the deadlines above may only be considered by petition due to documented extraordinary circumstances and committee approval. The Retroactive Drop/Withdraw Petition and the Petition for a Refund of Tuition and Fees forms are available on the Registrar’s website.

Withdrawing from the university means that you are dropping all of your courses and are no longer enrolled for the current semester. This may occur until the Friday before pre-finals week. The withdrawal process is initiated with your academic advisor in your student academic services office. For additional information and dates, go to: http://academicaffairs.okstate.edu/policies-a-procedures/35-adding-a-dropping-policy

ALERTS AND RESCHEDULING
If the OSU campus officially closes due to inclement weather or other emergencies, alerts are provided to local news media and are posted on the OSU website. Exams, classes, or assignments that are missed in these circumstances may be rescheduled at times that are outside the normal meeting schedule for the class. If valid, documented circumstances prohibit students from attending the rescheduled classes, instructors should provide reasonable alternative means for makeup.

ACADEMIC INTEGRITY POLICY
Oklahoma State University is committed to the maintenance of the highest standards of integrity and ethical conduct of its members. This level of ethical behavior and integrity will be maintained in this course. Participating in a behavior that violates academic integrity (e.g., unauthorized collaboration, plagiarism, multiple submissions, cheating on examinations, fabricating information, helping another person cheat, unauthorized advance access to examinations, altering or destroying the work of others, and fraudulently altering academic records) will result in an official academic sanction. Violations may subject you to disciplinary action including the following: receiving a failing grade on an assignment, examination or course, receiving a notation of a violation of academic integrity on your transcript, and being suspended from the University. You have the right to appeal the charge. Contact the Office of Academic Affairs, 101 Whitehurst, 405-744-5627. Go to http://academicintegrity.okstate.edu/ for a video on OSU’s academic integrity policy and additional information.

COPYRIGHT & FAIR USE POLICY OF COURSE MATERIALS
Course materials may not be published, leased, sold to others, or used for any purpose other than appropriate OSU-related group study without the written permission of the faculty member in charge of the course and other copyright holders. This paragraph grants you a limited license giving you access to materials for this course, including PowerPoint slides, audio/video recordings, written, or other materials, for appropriate OSU-related educational use only. Lectures should not be recorded without permission from the faculty member and must not be further disseminated or shared.

CLASS ATTENDANCE
Class attendance is a critical component of learning; therefore, you are expected to attend and participate fully in all scheduled class meetings. Many instructors consider attendance so essential that your grade may be affected by your absence. SOME DEPARTMENTS AND PROFESSORS HAVE MANDATORY ATTENDANCE POLICIES. If no written attendance policy is provided before the last day to add a class without instructor permission, no penalty may be assessed for class absences although you may not be permitted to make up certain in-class activities. If you are required to participate in official university-sponsored activities or military training, you should receive an excused absence unless the written course attendance policy indicates otherwise. If you will be absent from class for sponsored activities, you must provide prior notification of the planned absence to the instructor. You may be required to submit assignments or take examinations before the planned absence.

PRE-FINALS WEEK POLICY
Final examinations are scheduled at the end of each semester and are preceded by pre-finals week, which begins seven days prior to the first day of finals. During pre-finals week, all normal class activities will continue; however, no assignment, test, or examination accounting for more than 5% of the course grade may be given; and no activity or field trip may be scheduled that conflicts with another class. This excludes makeup and laboratory examinations, out-of-class assignments (or
projects) made prior to pre-finals week, and independent study courses. No student or campus organization may hold meetings, banquets, receptions, or may sponsor or participate in any activity, program, or related function that requires student participation. For additional information, contact the Office of Academic Affairs, 405-744-5627, 101 Whitehurst.

**FINAL EXAM OVERLOAD POLICY**
In the event that you have three or more final exams scheduled for a single day, you are entitled to arrange with the instructor of the highest numbered course (4 digit course number) or two highest, if you have four finals on one day, to re-schedule that examination(s) at a time and place of mutual convenience during final exam week. If the final exam overload includes a common final exam, the common final exam is excluded from rescheduling unless multiple common exams are scheduled at the same time. You should submit this request in writing, with a copy of your class schedule, at least two weeks prior to the beginning of final exam week. The instructor has one week prior to the beginning of final exam week to arrange a mutually convenient time and place for administration of the final exam. After one week, if an agreement cannot be reached, take the request to the department head.

**INFORMATION TECHNOLOGY**

**Student Email** - OSU uses your OKSTATE.EDU email address as a primary form of communication. Students are expected to check their OSU email on a frequent and consistent basis to remain informed of their official university business. If you do not use the OSU email system you must redirect your okstate.edu email using the Orange-Key System (www.okey.okstate.edu). Failure to maintain an accurate email address may result in missed or lost university communications. For email assistance contact the IT Helpdesk at 405-744-HELP (4357).

**Computer Labs** - A complete description of computer labs and hours of operations are available at their website: https://it.sharepoint.okstate.edu/TechnologySupport/DeskSide/default.aspx. Lab information is also available by calling the Information Technology Help Desk, 405-744-HELP (4357).

**LIBRARY HOURS**
Edmon Low Library (405-744-6812)
Digital Library Toll Free: (1-877-744-9161)
Monday-Thursday 7:00 a.m.-2:00 a.m.
Friday 7:00 a.m.-10:00 p.m.
Saturday 9:00 a.m.-10:00 p.m.
Sunday 9:00 a.m.-2:00 a.m.
*For holiday and intersession hours, check http://www.library.okstate.edu/services/hours.htm
*Contact the following for information on hours of operation:
  Architecture Library 405-744-6047
  Curriculum Materials Library 405-744-6310
  Veterinary Medicine Library 405-744-6655
Library web address: www.library.okstate.edu

**GENERAL EXPECTATIONS OF STUDENTS**
By enrolling at Oklahoma State University, you accept responsibility for complying with all University policies and contracts, and for local, state and federal laws on- or off-campus that relate to the University’s mission. The Student Rights and Responsibilities Governing Student Behavior document explains the standards of behavior expected of you, processes in place for enforcing the rules, and the University’s response to violations http://studentconduct.okstate.edu/

In general, the University expects you to respect the rights of others and authorities, represent yourself truthfully and accurately at all times, respect private and public property, and take responsibility for your own actions and the actions of your guests. Call 405-744-5470 for more information.

**SEEK ANSWERS TO YOUR QUESTIONS**
The OSU faculty and staff want you to be successful in your educational pursuits. If you have questions or concerns, seek help EARLY. We are here to assist you.

**WHERE TO GO FOR HELP**
Instructor - If you have questions regarding your class, talk to your instructor. Faculty members usually include their office hours and/or phone number in the class syllabus. If you cannot locate this information, set a time to meet with your instructor by speaking with him/her prior to or immediately following your class session or check with the departmental office on when the instructor may be available.

Academic Advisor - All students will benefit by conferring with an advisor on a regular basis. If you do not know your advisor, or are unhappy with your advisor, talk to the Student Academic Services Director for your college.

Academic911.okstate.edu - Your online resource for academic and personal success, sponsored by Student Affairs.

**Mathematics Learning Success Center**
5th Floor, Edmon Low Library/405-744-5818
http://www.math.okstate.edu/
Tutors are available to answer questions for classes ranging from Beginning Algebra through Calculus II. Tutoring for Differential Equations and Linear Algebra is offered at specific times.

**Writing Center**
440 Student Union/405-744-6671
http://osuwritingcenter.okstate.edu/
The Writing Center helps writers throughout the composing process; you should plan to visit early and often throughout the semester, not just the day before an assignment is due. Tutors will work with you to improve your brainstorming, organizational, and composing techniques.

**Learning & Student Success Opportunity (LASSO) Tutoring Center**
021 Classroom Building/405-744-3309
http://lasso.okstate.edu/
LASSO offers free individual tutoring for a variety of courses.

**University Counseling Services**
320 Student Union/405-744-5472 or 405-744-7007
http://ucs.okstate.edu/
Professional counselors offer confidential personal and/or career counseling.

**Office of Student Disability Services**
315 Student Union/405-744-7116
http://ods.okstate.edu/
According to the Americans with Disabilities Act, each student with a disability is responsible for notifying the University of his/her disability and requesting accommodations. If you think you have a qualified disability and need special accommodations, you should notify the instructor and request verification of eligibility for accommodations from the Office of Student Disability Services. Please advise the instructor of your disability as soon as possible, and contact Student Disability Services, to ensure timely implementation of appropriate accommodations. Faculty have an obligation to respond when they receive official notice of a disability but are under no obligation to provide retroactive accommodations. To receive services, you must submit appropriate documentation and complete an intake process during which the existence of a qualified disability is verified and reasonable accommodations are identified.

**Office of Equal Opportunity**
408 Whitehurst/405-744-9153
Oklahoma State University policy prohibits discrimination based upon gender, race, color, ethnicity, age, religion, national origin, veteran’s status, disability, or sexual orientation. If you believe that you are being discriminated against, please contact this office.