COURSE SYLLABUS

PHYS 2A   GENERAL PHYSICS

INTRODUCTION TO COURSE AND INSTRUCTOR

(This is a "**virtual**" course)   (Updated on 1/20/2022)

PHYS 2A GENERAL PHYSICS (PHYS2A-05-35963-2223)	
Semester Spring 2022	**Department of Physics** **California State University, Fresno**
Course Name: GENERAL PHYSICS	**Instructor Name: Pei-Chun Ho**
Units: 4 3 (lecture) + 1 (lab)	**Office Location: McLane 255** (or McLane 254 Research Laboratory)
Time Tuesday & Thursday: 5:00 PM – 6:15 PM	**E-Mail** peiho@mail.fresnostate.edu
Location: McLane 162 Before Jan. 31, 2022, Class meetings will be held online temporally due to the omicron variant driven spike in COVID-19 infection. (Wait for further announcements).	**Telephone** (559) 278-5990

Website
 	
To access the course login to Canvas (http://fresnostate.edu/academics/canvas/) using your Fresno State username and password. For help with Canvas, contact the Academic Technology Resource Center at 278-7373 or send an email to canvas@mail.fresnostate.edu
	Office Hours
	
	Tuesday & Thursday at McLane 162
	     7:45 PM – 9:00 PM
	(a Zoom link will be set up simultaneously)
	
	Monday & Wednesday at McLane 255:
	             12 PM – 1 PM
	(a Zoom link will be set up simultaneously)
	
	For further hours, upon request by email

The following sections regarding COVID are subject to change
given changing circumstances on-campus and in the community.
Please check the COVID website for the most up-to-date information at:

www.fresnostate.edu/coronavirus
Vaccination: All Students who access Campus/Programs must be Fully Vaccinated (including the booster dose when eligible to receive it) by Feb. 28, 2022. Students may attest to a Medical or Religious Exemption from the vaccine policy requirement in accordance with CSU and campus procedures. Students should go to the Student Portal to update their COVID self-certification form and vaccine documentation. Requests for exemptions can be found there. You are not to come to campus if any of the following are true:
- **You have not received an Approved Vaccine and are not considered fully vaccinated, and you have not attested to a medical or religious exemption.**
- **You have attested to an exemption from the vaccine requirement, but you have not completed your mandatory weekly COVID-19 test.**

Health Screening: Students who come to campus and/or are participating in off-campus in-person experiential learning will be required to complete a daily health screening before coming to campus or learning site. You are not allowed to come to campus if any of the following is true:
- If you have experienced COVID-19 symptoms (vaccinated or not).
- If you have tested positive within the past 10 days.
- If you have had close contact (less than 6 feet for longer than 15 minutes) with someone confirmed to have COVID-19 within the past 14 days.

Please complete the campus online reporting form. A campus official will reply to provide guidance and information.

Safety Measures: Face coverings are required to be worn indoors on-campus and during in-person classes (vaccinated or not), and/or in accordance with learning site requirements if participating in off-campus experiential learning, to reduce the risk of community spread of COVID-19. The Student Health and Counseling Center has complimentary masks available for students who need them. Good hygiene of hand washing for a minimum of 20 seconds or using hand sanitizer is required. Please avoid touching your face with unclean hands.

Please see university website for the most updated information:
www.fresnostate.edu/coronavirus

Please remember that the same student conduct rules that are used for in-person classroom instruction also apply for virtual/online classrooms.   Students are prohibited from any unauthorized recording, dissemination, or publication of any academic presentation, including any online classroom instruction, for any commercial purpose. In addition, students may not record or use virtual/online instruction in any manner that would violate copyright law. Students are to use all online/virtual instruction exclusively for the educational purpose of the online class in which the instruction is being provided.

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Students may not re-record any online recordings or post any online recordings in any other format (e.g., electronic, video, social media, audio recording, web page, internet, hard paper copy, etc.) for any purpose without the explicit written permission of the faculty member providing the instruction. Exceptions for disability-related accommodations will be addressed by Student Disability Services working in conjunction with the student and faculty member.

Course description: (http://www.fresnostate.edu/catalog/).

This three-unit course will introduce the fundamentals of classical Newtonian mechanics. Topics include linear and circular motions; analysis of various forces, free-body diagrams; studies of various energies: work, kinetic energy, potential energy, mechanical energy, energy in general; systems of particles; linear and angular momentum; rigid-body motion and rotational dynamics; gravity; wave motion, fluids, and thermal physics. In addition, the course fits into the curriculum General Education (G. E.) Breadth B1 which requires 3 lecture and 3 laboratory hours.

❖ *It is usually expected that students will spend approximately 2 hours of study time outside of class for every one hour in lecture. Since this is a 3 unit class, you should expect to study an average of 6 hours outside of class each week.*

Prerequisites for the course:

Proficiency in High-School Algebra, Geometry, and Trigonometry

> **MATH 75***/Calculus I***:** Functions, graphs, limits, continuity, derivatives and applications, definite and indefinite integrals.

or MATH 75A*/ Calculus with Review* **IA:** Functions, graphs, limits, continuity, derivatives, and applications, with extensive review of algebra and elementary functions.

or MATH 70*/Calculus for Life Science***:** Functions and graphs, limits, derivatives, antiderivatives, differential equations, and partial derivatives with applications in Life Sciences..

or Math 6*/Precalculus***:** Basic algebraic properties of real numbers; linear and quadratic equations and inequalities; functions and graphs; polynomials; exponential and logarithmic functions; analytic trigonometry and functions..

or DS 71*/Quantitative Analysis***:** Quantitative formulation and solution of problems in various disciplines, including mathematics of finance, linear programming, probability, and differential calculus.

or permission to register from the physics department office

REQUIRED COURSE MATERIALS

I. *Immediate Access* (*IA*) is set up for this course by using **Macmillan Learning Achieve**.

- "Enroll in a New Course" through **Canvas - Macmillan Learning** on course navigation. Follow the procedure posted in the PDF file of "EnrollAchievePHYS2AbyCanvasCourse_Steps."
  - ➢ User name should be your Fresno State email address: **XXXXXX@mail.fresnostate.edu**
  Course Name: 2022 Spring PHYS2A
  Course ID: 8cc6tk
- Once enrolled for Achieve, a student can go directly to MacMillan Achieve webpage
  https://achieve.macmillanlearning.com/courses/8cc6tk/mycourse
  for future access.
- IA contains an eBook, prelecture activities, and homework, and iClicker-Reef from MacMillan Learning-Achieve:
  - ➢ eBook of "**College Physics, Volume 1**" (by *OpenStax*), which is licensed under a Creative Commons Attribution 4.0 International License (CCBY4.0). A PDF format of this textbook can be "**access for free at openstax.org**."
    https://openstax.org/details/books/college-physics
  - ➢ Prelecture activities (prelecture video and bridge assignment (by *Achieve*),
  - ➢ Homework (by *Achieve*).
  - ➢ iClicker-Reef can be linked through "iClicker Sync" on your Canvas navigation. Follow the procedure posted in the PDF file of "EnrolliClickerPHYS2AbyCanvasCourse_Steps"
    - ▪ Once enrolled for iClicker, a student can also operate through APP, which (on laptops or Mobile device) is required for in-class quick quizzes. The iClicker-Reef Class is "**PHYS2AHo2022S**" (remember that it has been setup through Canvas).

- Enrolling into an Immediate Access (IA) course means that all or some of the materials are delivered to students digitally through the professor's Canvas system.
- ALL IA materials are freely accessible for the first 10 days of the start of the semester to all students enrolled. After the 10th day of the semester, students who did not OPT OUT of the materials will be charged on their student account the cost of the materials. This information can be found in https://accessportal.follett.com/ (Links to an external site.) mentioned in their welcome letter email from noreply@follett.com.
- OPTING OUT means that students DO NOT want ANY of the materials delivered digitally FOR THAT SECTION. STUDENTS will then be responsible to get the materials on your own – usually at a higher cost. If students OPT OUT, ALL of their digital IA access will be revoked for that section. **IMPORTANT!** If students OPT OUT of the program, they will also OPT OUT of the required ADAPTIVE materials including their homework, quizzes, tests, etc…

- **THE LAST DAY TO OPT OUT for SPRING 2022 is February 4, 2022**. – It is the STUDENT'S responsibility to OPT OUT through https://accessportal.follett.com/.
- Student accounts will be charged after the Opt-Out date. Students will have one week to pay their Fresno State student account obligation either online or at Joyal Administration. If they are on financial aid, scholarship or other benefit programs they are still obligated to pay on their account…They should put this money aside.
- If students enroll after the 10th day of class, they will have 24 hours to review the materials and OPT OUT of the program.
- Any questions about the IA program can be directed to ecarmona@mail.fresnostate.edu

II. **Scientific Calculator (Graphing Calculator is "Not" allowed for this course)**.

III. A Fresno Stat email account. Instructor will not respond to the emails not sent through the Fresno State system.

IV. Zoom (available to all Fresno State students) https://fresnostate.edu/help/students/video_conferencing/

COURSE SPECIFICS

This course will include assigned prelecture activities, which includes prelecture video and bridge assignments (i.e., Macmillan Learning-Achieve) that should be completed before students come to each virtual class meeting (via Zoom Meeting). During the virtual class sessions there will be lectures, demonstrations, quick quizzes, and discussions. Associated assigned reading for each lecture can be found in the ebook. In order to facilitate your understanding of assigned readings, lecture notes in PDF format can be available after each Zoon class meeting, which may review portions of the readings, but they will not serve as a substitute for reading the materials. Important additional information will be presented during the lectures, which will be included in the exams.

Course goals: Upon completion of this course, students are expected to be able to analyze, predict, and model the linear or rotational motion of macroscopic objects under the influences of various external forces.

Student Learning Outcomes: Students will develop a strong foundation to identify, analyze, and solve problems within the core driplines described in the text book of "College Physics, Volume 1 by OpenStax," which are universally recognized as standards in undergraduate physics education.

PHYS 4A along with PHYS 4AL is also a General Education (GE) course in the area B1, which is expecting students to understand and actively explore fundamental principles in the Physical Sciences and the methods of developing and testing hypotheses used in the analysis of the physical universe.

Links: General Education and Writing (APM 216)

GE Program Portfolio Requirement for Students: Students can upload one of their best PHYS 4AL lab reports to Canvas in order to fulfill the requirement of GE assessment.

Course requirements/assignments: In this section, list all required work that makes up the total grade for the course, such as quizzes, exams, homework, paper, service hours, project and presentation, etc. Be sure to specify **if attendance and/or participation is required** and how it impacts student grades.

I.   Prelecture Activities: prelecture video and bridge assignment need to be completed 3 hours before the virtual class meeting time. They will be assigned at least a week ahead and can be accessed through Sapling Learning by Canvas-IA Bookshelf. (3% of lecture grade)

II. Quick Quizzes: In order to encourage students to preview the ebook contents, perform prelecture activities before class, focus learning in the virtual classroom, and engages in interactive learning, 1-10 questions will be randomly given as quick quizzes in most of the class meeting time. Total of the quick-quiz score which will be counted as 6% of the lecture grade. Full participant points will only be given when students complete all quick-quiz questions.

III. Homework will be assigned via Sapling Learning by Canvas-IA Bookshelf and usually given in the end of each week. Homework passes the deadline will be counted as zero. (15% of the lecture grade)

IV. Three midterms will be offered and total weighs 51% of the lecture grade

V.   Final exam will be given according to the University Final Exam (25% of the lecture grade).

Besides the Zoom Office hours student can talk to the instructor through Zoom, other communications are preferred done through Fresno State email. *When sending an email message you **must** use a specific format. Type your last name and first initial in the 'subject' line along with the course number (PHYS 2A). Example: Doe, John PHYS2A.*

Grading policy:

Weighted Grades for Lecture Part 85%   = 100 % (× 85%)]

   Prelecture Activities (Video & Bridge Assignment)   3 % (× 85%)

   Quick Quizzes   6 % (× 85%)

   Homework   15 % (× 85%)

   Three Midterms   51 % (17% each) (× 85%)

   Final Exam   25 % (× 85%)

+) Weighted Grades for Laboratory (lab reports & quizzes) 15%

   Total Possible Points   100%

   (**Grade will "Not" be curved, completely based on performance.**)

Letter Grade Range:

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A:  100      -  85
B:  84.99    -  75          D:   59.99   -  50
C:  74.99    -  60          F:   49.99   -   0
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Examination Schedule

Date	Exam	Points
Tuesday, 2/22/2022 (Time: To Be Announced)	1st Midterm on Canvas with Lockdown Browser + Webcam	100
Thursday, 3/17/2022 (Time: To Be Announced)	2nd Midterm on Canvas with Lockdown Browser + Webcam	100
Thursday, 4/21/2022 (Time: To Be Announced)	3rd Midterm on Canvas with Lockdown Browser + Webcam	100
Tuesday, 5/17/2021 5:45 PM – 7:45 PM	Final Exam on Canvas with Lockdown Browser + Webcam	100

All deadline of prelecture activities and homework can be found on the Macmillan-Learning – Achieve Course "2020 Spring PHYS2A."

COURSE POLICIES & SAFETY ISSUES

Classroom Behavior

Both the instructor and the students are to adhere to high standards of professionalism, common courtesy, and respect for others. Please refrain from the following behaviors, bearing in mind that if your behavior interrupts the class you may be asked to leave the class for the rest of the period:

- Coming to virtual class meeting late, please mute your audio to avoid interrupting sound.
- Do not speak or write to anyone in a rude or aggressive fashion, or speak of others in a disrespectful fashion
- The University Policy on Disruptive Classroom Behavior (APM 419) is well worth reading and can be found in the Class Schedule and the Academic Policy Manual.

If you are absent from class, it is your responsibility to check on announcements made while you were away.

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Audio and video recordings of class lectures are prohibited unless I give you explicit permission to do it. Students with an official letter from the Services for Students with Disabilities office may record the class if SSD has approved that service."

Late work and make-up work policy: Either delayed or make-up exams for three midterms and final exam will not be allowed by the instructor. If a midterm is missed for a compelling reason (e.g. illness documented by a physician's note), the part of the grade that midterm would have counted will be voided, and the rest of the grade will be counted as 100%. If the final exam is missed for a compelling reason (e.g. illness documented by a physician's note), the student will receive a grade of **"I"** (incomplete) for PHYS 4A for the semester. It will also be the student's responsibility to contact the university administration in a timely manner, and make the necessary arrangements to remove the **"I"** grade. Please check "the California State University Fresno General Catalog" for regulation regarding the **"I"** grade. Only students who can document very compelling reasons to miss final exams, e.g. with a physician's note, will be eligible for incompletes; other students missing the final exam will receive 0% for the grade of final exam.

Plagiarism Detection: The campus subscribes to Turnitin plagiarism prevention service through Canvas, and you will need to submit written assignments to Turnitin. Student work will be used for plagiarism detection and for no other purpose. The student may indicate in writing to the instructor that he/she refuses to participate in the plagiarism detection process, in which case the instructor can use other electronic means to verify the originality of their work. Turnitin/SafeAssign Originality Reports **WILL/WILL NOT* be available for your viewing.**

UNIVERSITY POLICIES

Students with Disabilities: Upon identifying themselves to the instructor and the university, students with disabilities will receive reasonable accommodation for learning and evaluation. For more information, contact Services to Students with Disabilities in the Henry Madden Library, Room 1202 (278-2811).

The following University polices can be found at:

- Adding and Dropping Classes
- Cheating and Plagiarism
- Computers
- Copyright Policy
- Disruptive Classroom Behavior
- Honor Code
- Students with Disabilities
- Title IX

UNIVERSITY SERVICES

The following University services can be found at:

- Associated Students, Inc.
- Dream Success Center
- Learning Center Information
- Student Health and Counseling Center
- Writing Center

TENTATIVE COURSE SCHEDULE

The course schedule is subject to change in the event of extenuating circumstances.

> ➤ If you are absent from class, it is your responsibility to check on announcements made verbally in class while you were absent.

Spring 2022
(Tuesday, Thursday Course)

	Date	Topic	Reading Assignment
	Tu.., Jan. 18	**Fresno State Spring Semester Begins**	
1	Thurs., Jan 20	Course Syllabus & General Rules Fundamental Quantities, Units, Significant Figures (study on students' own) 1-D Kinematics	Math Review On Sapling (Self Test) Syllabus Posted on Canvas Ch1 Introduction: The Nature of Science and Physics 1.1 Physics: An Introduction 1.2 Physics Quantities and Units 1.3 Accuracy, Precision, and Significant Figures (study on students' own and will be included in the homework and exams) Ch2 Kinematics (Motion in 1 D) 2.1 Displacement 2.2 Vectors, Scalars, and Coordinate Systems 2.3 Time, Velocity, and Speed 2.4 Acceleration 2.8 Graphical Analysis of 1-D Motion 2.5 Motion Equations for Constant Acceleration in 1D
2	Tues., Jan 25	1-D Kinematics	Ch2 Kinematics (Motion in 1 D) 2.6 Problem-Solving Basics for 1-D Kinematics 2.7 Falling Objects 2.8 Graphical Analysis of 1-D Motion
3	Thurs., Jan 27	Vector Addition	Ch2 Kinematics (Motion in 1 D) 2.2 Vectors, Scalars, and Coordinate Systems Ch3 Two-Dimensional Kinematics 3.2 Vector Addition and Subtraction: Graphical Methods
4	Tues., Feb 1	Vector Addition	3.3 Vector Addition and Subtraction: Analytical Methods
5	Thurs., Feb 3	2-D Kinematics	Ch3 Two-Dimensional Kinematics 3.1 Kinematics in 2D

	Date	Topic	Reading Assignment
6	Tues., Feb 8	Projectile Motion	Ch3 Two-Dimensional Kinematics 3.4 Projectile Motion
7	Thurs., Feb 10	Relative Motion (Classic Relativity)	Ch3 Two-Dimensional Kinematics 3.5 Addition of Velocities (Relative Motion, Non-Relativistic)

8	Tues., Feb 15	Newton's Laws of Motion	Ch4 Dynamics: Force and Newton's Laws of Motion
			  4.1 Development of Force Concept
			  4.2 Newton's 1st Law of Motion: Inertia
			  4.3 Newton's 2nd Law of Motion: Concept of a System
			  4.4 Newton's 3rd Law of Motion: Symmetry in Forces
			Ch6 Uniform Circular Motion and Gravitation
			  6.5 Newton's Universal Law of Gravitation

9	Thurs., Feb 17	Forces & Free-Body Diagrams	Ch4 Dynamics: Force and Newton's Laws of Motion
			  4.5 Normal, Tension, and Other Examples of Forces
			Ch5 Further Applications of Newton's Laws: Friction, Drag, and Elasticity
			  5.3 Elasticity: Stress and Strain (Most Omitted, except "**Hooke's Law**" for **Spring Force**)
			Ch16 Oscillatory Motion and Waves
			  16.1 **Hooke's Law** (for **Spring Force**)
			Ch4 Dynamics: Force and Newton's Laws of Motion
			  4.6 Problem-Solving Strategies

10	Tues., Feb 22	Forces & Free-Body Diagrams	Ch4 Dynamics: Force and Newton's Laws of Motion
			  4.6 Problem-Solving Strategies
			  4.7 Further Applications of Newton's Laws of Motion

11	Thurs., Feb 24	Friction	Ch5 Further Applications of Newton's Laws: Friction, Drag, and Elasticity
			  5.1 Friction
			  5.2 Drag Forces (Omitted)
			  5.3 Elasticity: Stress and Strain (Omitted)

12	Tues., Mar 1	Uniform Circular Motion	Ch6 Uniform Circular Motion and Gravitation 6.1 Rotational Angle and Angular Velocity

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	Date	Topic	Reading Assignment
			6.2 Centripetal Acceleration 6.3 Centripetal Force 6.4 Fictitious Forces and Non-inertial Frames: The Coriolis Force (Omitted)
13	Thurs., Mar 3	Free-Body Diagram in Circular Motion	Ch6 Uniform Circular Motion and Gravitation 6.3 Centripetal Force 6.4 Fictitious Forces and Non-inertial Frames: The Coriolis Force (Omitted) 6.5 Newton's Universal Law of Gravitation 6.6 Satellites and Kepler's Laws: An Argument for Simplicity
14	Tues., Mar 8	Work & Kinetic Energy	Ch7 Work, Energy, and Energy Resources 7.1 Work: The Scientific Definition 7.2 Kinetic Energy and the Work-Energy Theorem
15	Thurs., Mar 10	Work by Conservative Forces (Gravitational Force and Spring Forces) Potential Energy Conservation of Mechanical Energy	Ch7 Work, Energy, and Energy Resources 7.4 Conservative Forces and Potential Energy 7.3 Gravitation Potential Energy 7.6 Conservation of Energy
16	Tues., Mar 15	Work done by Nonconservative Force (Friction) Conservation of Energy Power	Ch7 Work, Energy, and Energy Resources 7.5 Nonconservative Forces 7.6 Conservation of Energy 7.7 Power
17	Thurs., Mar 17	Center of Mass	
18	Tues., Mar 22	Linear Momentum, Impulse, and Momentum Conservation	Ch8 Linear Momentum and Collisions 8.1 Conservation of Linear Momentum 8.2 Impulse 8.3 Conservation of Momentum
19	Thurs., Mar 24	Inelastic Collisions	Ch8 Linear Momentum and Collisions 8.5 Inelastic Collisions in 1D 8.6 Collisions of Point Masses in 2D 8.7 Introduction to Rocket Propulsion (possible Omitted)
20	Tues., Mar 29	Elastic Collisions	Ch8 Linear Momentum and Collisions 8.4 Elastic Collisions in 1D 8.6 Collisions of Point Masses in 2D 8.3 Conservation of Momentum
	Thurs., Mar 31	**Holiday – Cesar Chavez Day**	

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	Date	Topic	Reading Assignment

21	Tues., Apr 5	Torque	Ch9 Statics and Torque
			   9.2 The 2nd Condition for Equilibrium
			   8.6 Collisions of Point Masses in 2D
			   8.7 Introduction to Rocket Propulsion

22	Thurs., Apr 7	Static Equilibrium	Ch9 Statics and Torque
			   9.1 The 1st Condition for Equilibrium
			   9.2 The 2nd Condition for Equilibrium
			   9.3 Stability
			   9.4 Application of Statics, Including Problem-Solving Strategies
			   9.6 Forces and Torques in Muscles and Joints (Study on Student's Own)

	Tues., Apr 12	**Spring Break**	
	Thurs., Apr 14	**Spring Break**	

23	Tues., Apr 19	Rotational Kinematics	Ch10 Rotational Motion and Angular Momentum
			   10.1 Angular Acceleration
			   10.2 Kinematics of Rotational Motion

24	Thurs., Apr 21	Rotational Kinematics &
		Rotational Kinetic Energy &
		Moment of Inertia
			Ch10 Rotational Motion and Angular Momentum
			   10.3 Dynamics of Rotational Motion: Rotational Inertia
			   10.4 Rotational Kinetic Energy

25	Tues., Apr 26	Pure Rolling Motion
		   – Rolling Without Slipping
			Ch10 Rotational Motion and Angular Momentum
			   10.4 Rotational Kinetic Energy

26	Thurs., Apr 28	Angular Momentum &
		Conservation of Angular Momentum
			Ch10 Rotational Motion and Angular Momentum
			   10.5 Angular Momentum and Its Conservation
			   10.6 Collisions of Extended Bodies
			   10.7 Gyroscopic Effects: Vector Aspects of Angular Momentum (Omitted)

27	Tues., May 3	Simple Harmonic Motion (S.H.M.) in a Spring-Mass System	Ch16 Oscillatory Motion and Waves
			   16.1 Hooke's Law (Review)
			   16.2 Period and Frequency in Oscillations
			   16.3 Simple Harmonic Motion: A Special Periodic Motion
			   16.5 Energy and the Simple Harmonic Oscillator
			   16.6 Uniform Circular Motion and Simple Harmonic Motion

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	Date	Topic	Reading Assignment	

28	Thurs., May 5	Temperature, Ideal Gas Law & Kinetic Theory	Ch13 Temperature, Kinetic Theory and the Gas Law
			   13.1 Temperature
			   13.2 Thermal Expansion of Solids and Liquids
			   13.3 The Ideal Gas Law
			   13.4 Kinetic Theory: Atomic and Molecular Explanation of Pressure and Temperature
			   13.5 Phase Changes
			   13.6 Humidity, Evaporation, and Boiling	

29	Tues., May 10	Heat: Thermal Energy	Ch14 Heat and Heat Transfer Methods
			   14.1 Heat
			   14.2 Temperature Change and Heat Capacity
			   14.3 Phase Chang and Latent Heat	

	Wed., May 12	**Last Day of Instruction of Spring Semester**		
Final Exam Preparation & Faculty Consultation Days:			Thursday and Friday	May 12 – 13
Final Semester Examinations			Monday – Thursday	May 16 – 19
Final Exam in this course (following the University Schedule)			**Tuesday, May 17**	**5:45 PM – 7:45 PM**

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