PHYSICS 1250 **SYLLABUS/ASSIGNMENT SHEET** **Autumn 2022**

provisional

Lectures

12:40 TWF	**Dr. Dongping Zhong**	**PRB 2142**	**614-292-3044**	**zhong.28@osu.edu**
1:50 TWF	**Dr. Dongping Zhong**	**PRB 2142**	**614-292-3044**	**zhong.28@osu.edu**
3:00 TWF	**Dr. ChunNing Jeanie Lau**	**PRB 2048**	**614-292-8140**	**lau.232@osu.edu**
4:10 TWF	**Dr. ChunNing Jeanie Lau**	**PRB 2048**	**614-292-8140**	**lau.232@osu.edu**
5:20 TWF	**Dr. Lei Bao**	**PRB 1016**	**614-292-2450**	**bao.15@osu.edu**
6:30 TWF	**Dr. Lei Bao**	**PRB 1016**	**614-292-2450**	**bao.15@osu.edu**

Course Materials: Pdf copies of course handouts are provided on CARMEN on the Modules page. For the **lab manual**, or for a **hard copy of the textbook**, please contact the **Barnes & Noble bookstore** on High Street. An **eBook** version of the Textbook is provided on WebAssign: see ***CarmenBooks*** below.

Technology Requirements: You will need an iPad to be able to upload written solutions during exams. When you work in discussion groups in recitation, you may need to use *OneNote* (a digital notebook), which is provided by OSU.

Text Book: *Physics for Scientists and Engineers with Modern Physics*, *10th edition* by Serway & Jewett. Reading Assignments in textbook: Indicated by [Chapter.Section] in **Course Schedule** below.

Lab Book: *Physics 1250 Activities & Worksheets,6th edition*.

Websites

Carmen: http://carmen.osu.edu/ – Course Specific Information; all course documents and handouts are available on the Carmen Home and Modules pages.

WebAssign Access: See ***OSU PHYSICS CarmenBooks WebAssign Student instructions*** on the Carmen/Modules page.

- **Online Homework and Prelabs are available on WebAssign. Please check WebAssign for up-to-date date and time deadlines for prelab and homework.**
- **Hand-in HW (HiHW) assignments and other documents and information are available on the Carmen/Modules page.**
- **Policy documents: "SUMMARY OF COURSE POLICY" and "GENERAL COURSE POLICY AND INFORMATION"** (for more detail) are available on the Carmen/Modules page.
- **Links to Essential Skills assignments are available on the Carmen/Modules page. For any issues regarding Essential Skills, contact physics-essential-skills@lists.service.ohio-state.edu).**

Support

WebAssign help: http://webassign.com/support/student-support/

Homework (HW) help: For homework help, please contact your TA or lecturer.

Tutoring: Offered during TA office hours; also, see https://physics.osu.edu/physics-tutoring.

WebAssign Issues (access and technical): Dr. Bolland (SM 1106D), 614-292-8065, bolland@physics.osu.edu.

For Excuses or Permission for anything: Course manager Dr. Ziegler – SM 1036A, 614-292-2067, ziegler.2@osu.edu – With any request: Please provide your name, TA name, recitation time, lecturer name.

Special Quizzes (on the Carmen/Quizzes page)

Quiz 0: Available 8:00 AM Tuesday, August 23, to 11:59 PM Sunday, September 11. This quiz may be done as often as you wish. This quiz may be done as often as you wish. The intent of this quiz is to give you practice uploading a file to the Carmen. Failure to do Quiz 0 before the first time an upload is required for an exam may result in a penalty.

Peer Review survey 1: available 8:00 AM Tuesday, September 27, to 11:59 PM Monday, October 17.

Peer Review survey 2: available 8:00 AM Friday, November 18, to 11:59 PM Monday, December 5.

Midterms and Final Exam

Midterm 1: Monday, September 26, rooms TBA (during evening meeting: 6:30 – 7:30 PM)

Midterm 2: Monday, October 31, rooms TBA (during evening meeting: 6:30 – 7:30 PM)

Final Exam: time and rooms TBA

Course Activity Conflict: By university rules, a regularly scheduled quiz, midterm, lab, or final exam takes precedence over common exams. The conflicting course must offer you an alternate time.

Grades:

Item	Lab	Prelab	On-line Homework	Hand-in Homework	Recitation Participation*	Quizzes	Essential Skills	Midterms	Final Exam
Weight	10%	3%	12%	6%	6% = (5+1) %	16%	3%	(2×12%)	20%
Notes	NO DROPS	1 dropped	NO DROPS	1 dropped	2 dropped - IPG	2 dropped	1 dropped		

*** Recitation Participation = IPG + PRP [IPG = Instructor Participation Grade; PRP = Peer Review Participation (survey)]. See Carmen/Modules for details.**

SEI Participation bonus: If at least 65% of students enrolled in a lecture section participate in the on-line survey "Student Evaluation of Instruction" (SEI) for both lecturer and recitation instructor, then a bonus of 0.5 % will be added to every student's percentage score in that lecture section after the grade scheme (curve) is determined.

Essential Skills Assignments (ES):

These are short weekly assignments to help improve your basic knowledge and skills critical for this physics course. To contact the ES team, send email to physics-essential-skills@lists.service.ohio-state.edu.

For each ES assignment, you will be given a number of skills to master. For each skill (designated by a segmented green circle) you will need to correctly answer several questions in a row, depending on the skill, in order complete the assignment. Often there are general explanations that you can access for some of the skills. Just a reminder: The intention of this assignment is to build fluency, not just accuracy. As a result, some skills will be repeated over the semester.

Grades will be input into Carmen by the end of the semester. You will receive full points for completing each unit, and you can check for completion on the ES page.

How to view grades correctly in Carmen:

To view your course average correctly, you must **unselect** the option "Calculate based only on graded assignments". This option appears on the upper right-hand side of the Grades page, under "Assignments weighted by Group". If the option "Calculate based only on graded assignments" is selected, the average you see will be calculated only from those items that show a grade in the grade book: blank items are ignored, but they are not ignored in determining your final grade.

"Health and safety requirements: All students, faculty and staff are required to comply with and stay up to date on all university safety and health guidance (https://safeandhealthy.osu.edu), which includes following university mask policies and maintaining a safe physical distance at all times. Non-compliance will be warned first and disciplinary actions will be taken for repeated offenses." (Updated: Aug. 14, 2020)

The university strives to make all learning experiences as accessible as possible. In light of the current pandemic, students seeking to request COVID-related accommodations may do so through the university's request process, managed by Student Life Disability Services. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

CarmenBooks

The textbook and/or courseware for this course is being provided via ***CarmenBooks***. Through CarmenBooks, students obtain publisher materials electronically through CarmenCanvas, saving them up to 80%per title. The fee for this material is included as part of tuition and is listed as *CarmenBooks fee* on your Statement of Account. In addition to cost-savings, materials provided through CarmenBooks are available immediately on or before the first day of class. There is no need to wait for financial aid or scholarship money to purchase your textbook. Unless you choose to opt-out of the program, you do NOT need to purchase any materials for this course at the bookstore – **except the lab manual**. For more information on the program or information on how to opt out, please visit the CarmenBooks website.

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General Schedule:

Lectures: **Lectures meet in the lecture hall SM 1153 on Tuesdays, Wednesdays, and Fridays (TWF).**

Recitations: **Recitations meet in-person on Mondays (M). On quiz days, students are expected to participate in a Group Work session (about 25 minutes) before the quiz (25 minutes).**

Exams: **Quizzes will be given during recitation. Students take midterms and the final exam in-person. Exams may contain multiple-choice and show-work problems.**

Students are advised to bring their BuckID cards during exams for identification.

Students approved by SLDS for extended time and other accommodations must make arrangements with SLDS to take exams at SLDS.

Hand-in Homework (HiHW): HiHW assignments are due to be uploaded on the Carmen/Assignments page by 11:59 pm Sundays before a quiz day.

Recitation Group Work (GW): Group Work participation sessions meet during recitation. Students work in assigned discussion groups of (usually) four members. GW assignments are due to be uploaded on the Carmen/Assignments page by 11:59 pm that evening (Monday). Students must be present in recitation to earn credit for GW.

Prelabs: Prelabs, available in WebAssign, are due by 11:59 pm Sunday, the week of a lab. Each numbered Experiment has a numbered Prelab.

Labs: Labs meet in-person. Students work together in same assigned discussion groups as in recitation.

Online Homework (HW): Usually due in WebAssign by 11:59 pm Fridays – check Course Schedule below for variations. Extensions of deadlines will be posted in WebAssign.

Essential Skills assignments, available through the Assignments pages, are due 11:59 pm Sundays.

Summary of P1250 Course Activities:

Activity	**Meeting Times**	**Where to Meet**	
Lecture	TWF	SM 1153	
Recitation	M	Recitation room	
Lab	TWR	Lab room	
Assignment	**Due**	**Where to Find**	**Where graded/to upload**
Quizzes	See Course Schedule	Carmen/ or TBA	Carmen/ or TBA
Midterm	See Course Schedule	Carmen/ or TBA	Carmen/ or TBA
Final Exam	See Course Schedule	Carmen/ or TBA	Carmen/ or TBA
Essential Skills (ES)	11:59 pm Sunday	Carmen/Modules and Assignments page (ES link)	NA
Hand-in Homework (HiHW)	11:59 pm Sunday	Carmen/Modules page	Carmen/Assignments page
Prelabs	11:59 pm Sunday	Carmen/Assignments page (WebAssign link)	NA
Group Work Participation	11:59 pm Monday	Carmen/Modules page	Carmen/Assignments page
Lab Work	During lab	Lab Manual	Lab room
Lab Group Work	During lab	Lab Manual	Lab room
Online Homework (HW)	11:59 pm Friday	Carmen/Assignments page (WebAssign link)	NA

Please Access WebAssign through the Carmen/Assignments page.

Course Schedule

Reading Assignment: [chapter, section], L = Lecture, R = Recitation, GW = Group Work (recitation), HW = Homework, HiHW = Hand-in HW, ↓ = assignment postponed to next day

Week	Day	Date	Activity	Reading [Chapter.Section]	Lab	Work due 11:59 pm
1	SUN	8/21				
	M	8/22	**No classes**			
	T	8/23	**L1**: Introduction; Units ***Quiz 0: available 8:00 AM***	[1]	**Intro Lab/Recitation: Working in groups** **practice HiHW** **Quiz 0**	
	W	8/24	**L2:** Motion in One Dimension	[2]		
	R	8/25				
	F	8/26	**L3:** Acceleration	[2]		**Online HW 0** **Online HW 1**
2	SUN	8/28	**ES01 due 11:59 PM**			**ES01** **prelab 1** **HiHW 1**
	M	8/29	**R1: discussion groups assigned** **GW 1, Quiz 1** (HW 1)			**GW 1**
	T	8/30	**L4:** Vectors	[3]	**Lab: Exp. 1 –** 1-D Kinematics	
	W	8/31	**L5:** Projectile Motion	[4.1-3]		
	R	9/01				
	F	9/02	**L6:** Forces	[5.1-5]		**Online HW 2**
3	SUN	9/04	**ES02 due 11:59 PM**			**ES02** **prelab 3**
	M	9/05	**Labor Day HOLIDAY – no classes**			
	T	9/06	**L7:** Forces – free body diagrams	[5.5-7]	**LAB: Exp. 3 –** 2-D Kinematics	
	W	9/07	**L8:** Forces and coupled motion	[5.7]		
	R	9/08				
	F	9/09	**L9:** Forces – Friction	[5.7-8]		**Online HW 3**
4	SUN	9/11	**ES03 due 11:59 PM**			**ES03** **prelab 4** **HiHW 2** **Quiz 0**
	M	9/12	**R2: GW 2, Quiz 2** (HW 2 and 3)			**GW 2**
	T	9/13	**L10:** Friction and Motion	[5.8]	**LAB: Exp. 4 –** Dynamic Forces	
	W	9/14	**L11:** Circular Motion	[4.4-5; 6.1-3]		
	R	9/15				
	F	9/16	**L12:** Circular Motion and Gravity ***(end of MT 1 material)*** ***Last day to drop without a W***	[13.1-3,5; 6 circular orbits]		**Online HW 4**
5	SUN	9/18	**ES04 due 11:59 PM**			**ES04** **prelab 5** **HiHW 3**
	M	9/19	**R3: GW 3, Quiz 3** (HW 4)			**GW 3**
	T	9/20	**L13:** Work & Energy	[7.1-5]	**LAB: Exp. 5 –** Static Friction	
	W	9/21	**L14:** Energy – potential energy	[7.6-9; 13.5]		
	R	9/22				
	F	9/23	**L15:** Conservation of Energy	[8.1-4; 13.6 Escape Speed]		**Online HW 5**
6	SUN	9/25	**ES05 due 11:59 PM**			**ES05** **prelab 6**
	M	9/26	**R4: Midterm 1** [Ch. 1-6, 13; HW1-4]			
	T	9/27	**L16:** Energy & Power ***Peer Review survey 1: available 8:00 AM***	[8.5]	**LAB: Exp. 6 –** Conservation of Energy	
	W	9/28	**L17**: Momentum	[9.1-7]		
	R	9/29				
	F	9/30	**L18:** Collisions	[9.1-7]		**Online HW 6**

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Week	Day	Date	Activity	Reading [Chapter.Section]	Lab	Work due 11:59 pm
7	**SUN**	**10/02**	**ES06 due 11:59 PM**			**ES06 prelab 8 HiHW 4**
	M	**10/03**	**R5: GW 4, Quiz 4** (HW 5 and 6)			**GW 4**
	T	**10/04**	**L19:** Center of Mass of Systems	[9.1-7]	**LAB: Exp. 8 –** Energy and Momentum	
	W	**10/05**	**L20:** Rotational Kinematics	[10.1-3]		
	R	**10/06**				
	F	**10/07**	**L21:** Rotation and Torque	[10.3-5]		**Online HW 7**
8	**SUN**	**10/09**	**ES07 due 11:59 PM**			**ES07 HiHW 5**
	M	**10/10**	**R6: GW 5, Quiz 5** (HW 7)			**GW 5**
	T	**10/11**	**L22:** Net Torque and Motion	[10.5-6]	**NO LAB**	
	W	**10/12**	**L23:** Rotational Energy and Motion	[10.7-9]		
	R	**10/13**	**Autumn Break – no classes**			
	F	**10/14**	**Autumn Break – no classes**			(prelab 9) ↓
9	**SUN**	**10/16**	**ES08 due 11:59 PM**			**ES08 prelab 9**
	M	**10/17**	**R7: GW 6**			**GW 6 *Peer Review 1***
	T	**10/18**	**L24:** Angular Momentum	[11.1-4]	**LAB: Exp. 9 –** Rotational Dynamics	
	W	**10/19**	**L25**: Conservation of Angular Momentum	[11.4-5]		
	R	**10/20**				
	F	**10/21**	**L26:** Static Equilibrium ***(end of MT 2 material)***	[12.1 - 3]		**Online HW 8**
10	**SUN**	**10/23**	**ES09 due 11:59 PM**			**ES09 no prelab HiHW 6**
	M	**10/24**	**R8: GW 7, Quiz 6 (HW 8)**			**GW 7**
	T	**10/25**	**L27:** Oscillations	[15.1-2]	**Lab: Worksheet** – Angular Momentum	
	W	**10/26**	**L28:** Oscillations	[15.3-5]		
	R	**10/27**				
	F	**10/28**	**L29:** Oscillations – damping & forcing ***Last day to drop without petition***	[15.6-7]		**Online HW 9**
11	**SUN**	**10/30**	**ES10 due 11:59 PM**			**ES10 prelab 10**
	M	**10/31**	**R9: Midterm 2** [Ch. 7-11; HW5-9]			
	T	**11/01**	**L30:** Fluids – statics	[14.1-4]	**LAB: Exp. 10 –** Vibrations	
	W	**11/02**	**L31:** Fluids - dynamics	[14.5-6,8]		
	R	**11/03**				
	F	**11/04**	**L32:** Temperature and Matter	[18.1-5]		**Online HW 10**
12	**SUN**	**11/06**	**ES11 due 11:59 PM**			**ES11 HiHW 7**
	M	**11/07**	**R10: GW 8, Quiz 7** (HW 9 and 10)			**GW 8**
	T	**11/08**	**L33:** Heat and Work; 1st Law of Thermodynamics	[19.1-4;5]	**LAB: Exp. 11 – Fluids**	
	W	**11/09**	**L34:** Kinetic Theory of Gases; Equipartition of Energy	[20.1-2;3]		
	R	**11/10**				
	F	**11/11**	**Holiday (Veteran's Day)**			**Online HW 11**

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Week	Day	Date	Activity	Reading [Chapter.Section]	Lab	Work due 11:59 pm
13	**SUN**	**11/13**	**ES12 due 11:59 PM**			**ES12** **prelab 12** **HiHW 8**
	M	**11/14**	**R11: GW 9, Quiz 8** (HW 11)			**GW 9**
	T	**11/15**	**L35:** Processes of an Ideal Gas on the PV plane	[19.5; 20.4]	**No lab today**	
	W	**11/16**	**L36:** Heat Engines and the 2nd Law of Thermodynamics; Carnot Engine	[21.1-2;3-4]	**LAB: Exp. 12:A –** Specific Heat; **Exp. 12:B –** Ideal Gas	
	R	**11/17**				
	F	**11/18**	**L37:** Entropy and the 2nd Law of Thermodynamics ***Peer Review survey 2: available 8:00 AM***	[21.6-8]		**Online HW 12**
14	**SUN**	**11/20**	**ES13 due 11:59 PM**			**ES13** **HiHW 9**
	M	**11/21**	**R12: GW 10, Quiz 9** (HW 12)			**GW 10**
	T	**11/22**	**L38:** Inertial Reference Frames, and the Relativity of Time and Space	[4.6; 5.2; 38.1-4 (ignore Doppler)]	**LAB: Exp. 12:A –** Specific Heat; **Exp. 12:B –** Ideal Gas	
	W	**11/23**	**Thanksgiving Break – no classes**		**NO LAB (Break)**	
	R	**11/24**	**Thanksgiving Break – no classes**			
	F	**11/25**	**Thanksgiving Break – no classes**			
15	**SUN**	**11/27**				(prelab 13) ↓
	M	**11/28**	**R13: GW 11**			**prelab 13: [read 38.5]** **GW 11**
	T	**11/29**	**L39:** Relativity and Velocity	[38.6; 4.6]	**No lab today**	
	W	**11/30**	**L40:** Relation of Inertial Frames	[38.5]	**No lab today**	
	R	**12/01**			**LAB: Exp. 13 –** Special Relativity	
	F	**12/02**	**L41:** Momentum and Energy	[38.7-8]		**Online HW13**
16	**SUN**	**12/04**	**ES14 due 11:59 PM**			**ES14**
	M	**12/05**	**R14: GW 12**			**GW 12** ***Peer Review 2***
	T	**12/06**	**L: TBA**		**LAB: Exp. 13 –** Special Relativity	
	W	**12/07**	**L: TBA**			**Online HW 14**
	AUTUMN SEMESTER FINAL EXAMS 12/09– 12/15 (F – R)					

This syllabus/assignment sheet is subject to change at any time.