

PHYSICS 038 – Physics For Scientists and Engineers - Section 1719 (SP 2014)

(M/W 11:10 am – 1:15 am, Tu 11:10 am – 2:25 pm)

Instructor: Elizabeth Bell

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Classroom: MSA 403

Office: MSB 224

Phone: 310-287-4585

Hours: M/W- 10:30am-11am, 1:30pm-2pm, 6:15pm-6:45pm, T- 2:30pm-3:30pm,

Th- 5:45pm-6:45pm (an by appointment)

Prerequisite: Math 262 (Calculus II), Physics 037

Required:

- **Textbook:** Physics for Scientists and Engineers with Modern Physics and Mastering Physics (4th Edition), by Douglas C. Giancoli
(If you purchase a used text, you will have to purchase Mastering Physics Separately ~ \$60 @ masteringphysics.com) – Course ID: EBELLPHYS038SP14
- **Scientific Calculator, Pencils, Graph Paper, Loose Leaf Paper**

Course Description

The second semester of a three semester calculus-level sequence in introductory college Physics designed for Physics, Astronomy, Chemistry, Engineering & Mathematics majors. Topics include thermodynamics (temperature, heat, heat engines, entropy), and electricity and magnetism (electric forces, electric fields, potential, magnetism, magnetic forces and fields, capacitance, resistance, inductance, DC and AC circuits). The laboratory includes both quantitative and qualitative experiments which permit students to verify, illustrate and deduce the laws of physics related to the topics discussed.

Student Learning Outcomes

INSTITUTIONAL OUTCOMES (SLOs):

A. CRITICAL THINKING: Analyze problems by differentiating fact from opinion, using evidence and sound reasoning to specify multiple solutions and their consequences.

C. QUANTITATIVE REASONING: Identify, analyze, and solve problems that are quantitative in nature.

F. TECHNICAL COMPETENCY: Utilize the appropriate technology effectively for informational, academic, personal, and professional needs.

PHYSICS DIVISION PROGRAM OUTCOMES (SLOs):

1. Develop critical thinking skills and move toward autonomous learning.
2. Comprehend, describe, and apply the procedures of physics and understand their limitations.
3. Demonstrate competence in applying the methods of scientific inquiry.
4. Apply the basic physics principles to a wide/diverse range of problems.

Grading:

- **Lecture Exams (3) → 20% of grade each (lowest score will be dropped)**
- **Final Exam (1) → 25% of grade**
- **Homework → 12% of grade**
- **Labs → 20% of class grade**
- **Class Participation → 3% of grade**

Grading Scale:

A 88% and higher **B** 76-87% **C** 64-75% **D** 51-63% **F** 50% and below

Extra Credit (you may earn up to 3% extra credit for the entire course).

Attendance: 3% (perfect attendance), 2% (1 absence), 1% (2A), 0% (more than 2 A); **Tardy counts as absence for extra credit count.**

Additional Extra Credit:

Present a poster in class and @ the 3rd annual Student Showcase campus poster competition.

(3 participation points if present for at least a half hour)

Food, music, cash prizes, something to put on your resume'.

Student Responsibilities: Physics is a challenging subject. Expect to spend an average of 6 hours per week (in addition to in-class time) on homework and review for this class. If you are having difficulty, you may work with a fellow classmate, utilize the tutoring center, or e-mail or see me in my office for additional help.

Homework: To be assigned by homework sets in [mastering physics](#). Your instructor will demonstrate how to set up an account and navigate the page on the first day of class. All homework assignments will be done on this site.

Exams: There are NO makeup exams in this class. Your lowest lecture exam will be dropped. **You MUST take the final exam in order to receive a grade for the class.**

Class Participation: One participation point earns you 1% for class participation. Participation counts as 3% of your grade. Participation opportunities will be announced in class. Every two participation points earned beyond the required 3 points will earn you extra credit on the exams. (up to 5% per exam and 10% total for exams).

TENTATIVE SCHEDULE

WEEK	LECTURE (M/W)	LAB (Typically Tues.)
Feb 10	21.1 – 21.6	Introduction / Review: Writing Lab Reports Lab 1
Feb 17	*No class Monday* 21.7-21.10, 22.1-22.2	Lecture/ Short Lab2
Feb 24	22.3, 23.1-23.7	Lab 3
Mar 3	24.1-24.5, 25.1	**TEST 1 (Ch. 21,22,23)** No Lab
Mar 10	25.2-25.9	Lab 4
Mar 17	26.1-26.6	Lab 5
Mar 24	27.1-27.5	Lab 6
Mar 31	*No class Monday* 28.1-28.5	**TEST 2 (Ch. 24,25,26,27)** No Lab
Apr 7	*No class Monday, Tuesday, or Wednesday*	Lab 7
Apr 14	28.6-28.7, 29.1-29.4, 29.7	Lab 8
Apr 21	30.2-30.9	Lab 9
Apr 28	31.1-31.5 *No class Monday*	**TEST 3 (Ch. 8, 9,10)** No Lab
May 5	31.6-31.7, 17.1-17.4	Lab 10
May 12	17.6-17.9, 18.1-18.2	Lab 11
May 19	18.3-18.5, 19.1-19.2	Lab 12
May 26	*No class Monday or Tuesday* 19.3-19.10 **Last Class on Monday, June 2**	Review for final Finish lecture
June 9 Monday	**FINAL EXAM** No class June 3-4 (finals week)	11:30 am – 1:30 am

Chapter 20 will be included if time permits

Additional Notes:

- All exams will be given on Tuesdays
- Your lowest lab score will be dropped (Note: exam questions may come from in-class laboratory material)
- All labs are worth 12 points (late homework will take a 10% reduction for each day late)

TO SUCCEED AND OBTAIN A GOOD GRADE IN THIS CLASS – YOU MUST:

- 1. Attend class regularly, attending all class sessions. Get to class on time, every time, and stay the whole time. You are responsible for information, test announcements, date changes, etc. – whether or not you are present.**
- 2. Complete assignments on time. You have may have one to one and a half weeks to complete one unit. I will not extend a due date if you wait until the last day to begin the assignments or (if because of emergency) you have not at least completed half of the assignment.**
- 3. Take at least 2 of the in-class tests and the Final Exam (I highly recommend planning to take all tests in case of unforeseen emergencies, or just to try to pull your grade up) on the days listed above - - No make ups!**
- 4. You are responsible for credit and enrollment status. You are responsible to drop the class – if you choose not to continue. (Note: you may be excluded if you are consistently absent or tardy). Last day to drop the class without a “W” is March 2, (with a ‘W’, May 4). Students failing to follow the correct procedure for withdrawal will receive a grade “F” for the course which will affect your GPA. Also note the new policy of only three repeats per class.**

Drop a Class w/o a Fee	Feb 21
Drop a Class w/o a W	Feb 21
Drop w/ a W	May 9

- 5. Each student is expected to do his/her own work on all tests. Academic dishonesty, or cheating, will result in a zero grade on that test (which will not be dropped), plus (in cases of continued academic dishonesty) a filing of a report with the Science Chairperson or Dean of Students giving your name and describing the incident.**
- 6. Expect to work hard. You will need to spend at least 6-8 hours per week to complete the required reading and review of material taught in class. Do not wait until the last minute to start assignments. This will result in incomplete assignments and you will not have sufficient time to absorb the material.**
- 7. Please turn off your cell phone before entering the class, and do not eat inside the NEW classroom. You may bring water bottles. You may use your cell phones during breaks.**
- 8. In taking this class, you are agreeing to abide by all the rules and regulations stated above – including dates of tests and final. This means that you do not schedule anything else on test days.**
- 9. Welcome to Physics 038!!**

** If you are a DSPS student requiring special accommodation for this class, please contact me after class during office hours during the first week.