Physics 416: Undergraduate Physics Review
Fall 2021, On-line
Asynchronous

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Please note:

- All e-mail communication from the instructor concerning this course will be to GMU accounts only.
- If you are a student with a disability and require academic accommodations, please see me and contact the Office of Disability Resources or `http://ds.gmu.edu/` or at 703.993.2474. All academic accommodations must be arranged through that office: `https://ds.gmu.edu/forms/`
- Other relevant student services:
  - Counseling and Psychological Services: `https://caps.gmu.edu/`

Overview:
This one-credit, half-semester is comprised entirely of exercises designed to review much of the core of the physics curriculum and the topics most likely to appear on the physics GRE. An exit survey may also be required for some, most, or all of you. All exercises are on-line, and may be completed at your convenience during their respective weeks (see schedule below). They are timed and must be completed in one sitting.

Course Goals:

1. To review undergraduate physics subjects
2. To assess students' understanding of undergraduate physics subjects
3. To practice for the physics Graduate Record Examination

Expectations:
Completion of all review instruments and possibly an exit suvrvey.

Browser Configuration:

Please be sure that pdf documents download either to your Downloads folder or to an external reader outside (external to) your browser. If pdf documents open in a browser window, you will not get the answer sheet and whatever you do will not be scored. Check on-line for instruction how to configure your browser and pdf reader for your operating system.

Grading: Each instrument is valued at 10 points, except for the practice GRE, which is valued at 20 points, for a total of 100 points. One point will be granted for attempting an instrument, and a maximum of 9 points will be granted for correct responses (that is, each problem/question is worth 9/N points, where N is the number of problems/questions).

A+ = 100-93.33	A = 93.32-86.67	A- = 86.66-80
B+ = 79.99-73.33	B = 73.32-66.67	B- = 66.66-60
C+ = 59.99-53.33	C = 53.32-46.67	C- = 46.66-40
	D = 39.99-20	
	F < 20	

Schedule:

Week	Subject	Instrument(s)
23 Aug	GRE	online: 100 questions, 170 minutes
30 Aug	Mechanics	online: 60 questions, 100 minutes
6 Sept	E&M	online: 55 questions, 100 minutes
13 Sept	Thermal and Atomic	1) online: 33 questions, 40 minutes; 2) online: 59 questions, 100 minutes
20 Sept	Quantum Mechanics	1) online: 31 questions, 50 minutes; 2) online: 40 questions, 75 minutes
27 Sept	Special Relativity, Lab, and Miscellany (Exit Survey)	1) online: 10 questions, 30 minutes; 2) online: 42 questions, 75 minutes online: $\sim$ 10 minutes

Attendance and Tardiness: Online instruments must be completed by the end of the week (Sunday, midnight) that they are scheduled (see schedule).

Diversity and Inclusion: George Mason University, the Department of Physics & Astronomy, and the instructor repudiate all manifestations of bigotry, intolerance, and discrimination. Please respect others as you would want them to respect you.

Honor Code Violations: Science is impossible when dishonesty, in any manifestation, exists. It's the worst possible conduct a scientist can display. Dishonesty of any sort (cheating, plagiarism, lying, stealing), as determined by the instructor, will result in an automatic F in the course, without recourse

to appeal. Those so accused will be reported to the honor council for further disciplinary action. Regardless of the results of council actions, the failing grade stands. **Don't cheat. Let nothing suggest that you cheated.**

The GMU Honor Code:
`https://oai.gmu.edu/mason-honor-code/`