



Approaching the Physics GRE

2/14 - Happy Valentine's Everyone



It's Just A Test

- You have probably taken ~40 physics exams.
 - Mechanics exams, E&M exams, quantum exams, thermal exams, optics exams...
- The PGRE is just another one:
 - You can study it
 - You can practice it
 - You can conquer it



What is the PGRE?

- 100 multiple choice questions (A-E)
- 2 hours and 50 minutes
 - 102 seconds per question
- Each question is weighted equally
- Costs \$150, \$180 late
- Test offered three times this year: April 6th, Sept. and Oct. (sign up early!)



What is the PGRE?

- Classical Mechanics - 20%
- Electromagnetism - 18%
- Optics & Waves - 9%
- Thermo + Stat mech - 10%
- Quantum - 12%
- Atomic Physics - 10%
- Special Relativity - 6%
- Lab methods and Special Topics - Don't worry



Should I take the PGRE?

- Yes
 - Nearly every physics program requires it
 - Most astronomy programs require it
 - Nearly every top program
 - It only helps you to take it
 - You will succeed on it



But the PGRE is Stupid

- Yes
 - Doesn't mean you shouldn't take it
 - Doesn't mean you shouldn't prioritize it
 - Doesn't mean it doesn't matter
 - Take this seriously, and it will benefit you



Preparing for the PGRE

- Review topics (resources in order of usefulness)
 - ‘Conquering the Physics GRE’ by Khan
 - CWRU Flash Cards
 - Hyperphysics
 - Your intro textbooks (University Physics)
 - Only for looking things up



Preparing for the PGRE

- PRACTICE
- Best way to study for the PGRE is the PGRE
- Take most tests TIMED and SERIOUSLY, still finish exam if you go over, keep track of score
- Tests and Solutions provided on resources slide
- Review solutions thoroughly
 - Doing this the night before increased our scores on average ~70 points



Your Plan

- Best to set up a 5-10 week plan
 - But you're going to procrastinate to a 2-3 week plan anyway
- Dedicate days to each topic, take notes!
- Schedule practice exams at regular intervals
 - Mini-review for each
- Ideally, spend last few days just reviewing notes and solutions and memorizing



Your Plan

- Take the April exam if you can
 - Actually study for it
- Practice exams are a resource, don't burn through all of them in April
- Then take the Sept. exam - make this the one
- Take Oct. if Sept. goes poorly (you'll be busy with apps)



Tips and Tricks

- MEMORIZE, don't derive
- Rule out solutions before doing the problem
- Skip hard/long questions
 - You SHOULD get to the end of the exam
- Join a STUDY GROUP
 - Collective knowledge is always greater than the individual's



Resources

- Totally legal version of Khan
 - <https://drive.google.com/file/d/1EHUkMKBwi6i6ke7mw88B0C6EWgHUC6dG/view?usp=sharing>
- Practice exams and solutions (use Faucett's, not perfect though)
 - <https://sites.google.com/a/uw.edu/physicsgre/home>
- CWRU Flash Cards
 - <http://physics.case.edu/flashcards/>