



1. Go to every single class and take active notes. Highlight/circle formulas/rules and write questions in the margins to look up later.

2. Work to understand the lecture concepts before you do problems. Read the textbook/watch videos on concepts you don't understand. Ask yourself: "why does this formula/theory exist?" "what evidence supports it?"

3. Test your knowledge by teaching material to a non-physics student or use a whiteboard and teach the material to yourself. In study groups, do problems before meeting and be ready to discuss them.

4. Test problems from simplest to most complex. Don't move on to challenging problems until you understand the simpler ones.

5. Ask yourself questions when doing problems – "why are you doing each step" and "how do you know that it's the correct move to make?" Try to anticipate what twists might show up on the exam.

6. Create formula study guides – define each variable, draw diagrams of difference application scenarios, and write a general list of steps for one simple and one complex problem. Identify when/how steps may change.

7. Make sure you can think through a problem on your own. Watching someone do problems is helpful, but don't let them problem solve for you.

8. Try not to look back at your notes when doing practice problems before an exam. Pretend you're being tested and try to figure things out on your own without reaching out for help.

9. Physics is cumulative and fluid. Try not to put formulas in ridged boxes. One scenario may be solved multiple ways with completely different formulas. Try to find more than one way to solve a problem.

10. Avoid doing your homework at the last minute by doing large assignments in small chunks each day. This way, you'll feel less pressured to get it done quickly and will have more time to fully understand it.