

How to be Successful in Physics

Physics builds on itself: Make sure you know the basics and don't get behind!

Physics isn't only math; it requires conceptual understanding also! Physics involves

- Understanding of the concepts physics is built on
- Reading something and getting useful information from the reading and situation
- From the information, finding out which scientific model to use
- From the scientific model, find out what equations to use and what numerical information is given
- Solve the equation algebraically
- Plug values in and solve numerically. Does the answer make sense?
- Take the numerical answer and connect it back to the situation

Be an active learner in class!

- Take detailed notes
- Write down any questions you have if you don't ask them in class
- Review your notes that day
- Participate actively in clicker questions and whiteboarding sessions

Read your notebook

- Make sure you understand what you have written in your notebook
- Get all questions answered
- Double check your notes with what is online
- Connect your notes to the scientific model
- Know where items are in your notebook (table of contents)

After class: Practice, Review and Study

- Review your notes for 20 to 30 minutes
- Write down any questions you have for the next day
- Do some practice problems
- When you get problem sets back, redo some problems to find out what mistakes were made and how not to make them again
- Don't just memorize, because you won't see the exact same problem again

Exam prep

- Don't cram
- Start the week below
- Review for about 30 minutes
- The next day review about 30 minutes
- Skip a day
- Review the next day
- When doing practice problems, ask yourself what would happen if I change the problem. For example, if the masses were not the same, or the ball was thrown up or down, or there was friction

Don't work alone

- You can work in it group for help
- Make sure the group makes study time a priority
- Make sure you can do the work on your own afterwards, not just when your classmates are there.

Get help when you need it

- Teacher
- Other students
- Academic Support Center

Think in terms of models

- Scientific models contain the concepts, definitions, variables, tools, and what to ignore that are tied to a core idea.
- The ~~map~~ model is not the ~~territory~~ nature – Alfred Korzybski
- The model will allow you to navigate through nature
- All models are wrong, but some are useful – George Box