

For introductory material, I have found it necessary to insure that students not only know how to solve the problems, but also understand why the solutions work. This is especially important for those students continuing in physics, as they will need to apply the methods and concepts to other problems. Depending on the field, this may be less necessary for those going into other fields, but it is still a vital skill. To this end, I prefer to both assign problems simply using formulas to learn their use, and also problems that break down the formulas and why they work. In some circumstances, this may also involve deriving the formulas.

For materials, for most undergraduate courses there are older textbooks that suffice and are much cheaper than more recent models. I am aware of a few that also give an effective outline. In addition, I have kept numerous old notebooks from my own course work for reference, and intend to keep materials once I have been in charge of courses for future work.

For introductory classes, even at a small school, classes are often too large to personalize too much. I personally favor lectures that involve recognizable but poor drawings and board work, as this tends to humanize the teacher. Although one must also make sure the level of that work is followable for the students. I also like to take questions as I go as when I was in those classes: I would often miss the window and my question would require much more work to answer at the end of the class. I have found that students are often reluctant to ask or answer questions in class. I'm working on how to work with this.

Furthermore, my recent teaching experience has taught me that even if students have technically had the prerequisites, they may have forgotten or misunderstood the material, especially for introductory physics courses, so it is often helpful to test the mathematical abilities of the class and, if necessary, teach or review the required mathematical skills. I am still working on how best to do this but with more teaching experience I should be able to work it out.

I prefer for non-introductory courses to introduce material and the proofs of it in the manner that it was discovered and explored historically, as this context is all too often lacking. Without this, there is a certain lack of historical perspective to the material.