

TEACHING PHILOSOPHY

Abdellatif M. AlSharif

PHYSICS IS NOT DIFFICULT, PHYSICS IS DIFFERENT

My teaching philosophy of physics based on the title of my teaching philosophy statement. Physics, like no other most sciences, needs imagination, understanding and memorization skills combined together skillfully, so the full picture of the physics problem under study, will be clear to the teacher and/or student. This means that a physics instructor must develop all of these skills in his/her students by training them how to implement them while working in any physics problem, by using the right teaching methods and techniques with the help of modern teaching technology.

When we study physics we should have, and obtain, a good scientific base of many other related sciences, like Mathematics and Chemistry. A physics high school teacher for example, can deal with many mathematical problems and can answer many chemistry based questions raised by his/her students. This is due to the wide range of knowledge a physics major student has to encounter while he is studying to obtain his physics degree, resulting from the nature of physics as a natural science.

For almost three decades of teaching physics in five different universities in three different countries my teaching philosophy was (and is) based on understanding the above mentioned points. I taught three graduate courses, Solid State Physics, Special Topics in Magnetism and Special Topics in Superconductivity, besides many undergraduate courses, and my teaching in all of these courses either it is a graduate or undergraduate course was based on simplifying the difficult by training the student how to combine the three elements (imagination, understanding and memorization) together to fully draw the right and clear picture of the physics problem before starting solving it. It worth mentioning here, that choosing the right and suitable homework problems is also important to build on such skills in our students.

One more important thing to mention, a physics student must encounter most of the concepts he/she is studying in books, at the laboratory. The picture will be fully clear in his/her mind if he/she sees the physical principle or the effect of it in an experiment, fully or partially designed by the student.

I love to teach physics and I do enjoy teaching very much, because I do feel what I teach, and I love to transfer this Physics passion to my students. If you love something you devote yourself fully to it.