Teaching mathematics and statistics in sciences (conclusions of an EU project from nonstandard point of view)

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It is known that phenomena in the Nature can often be described by quite complicated mathematical models which cannot be studied using only classical theoretical methods. On the other hand, Mathematics is only a tool for applied fields. Hence students, researchers would like to take most benefit with minimal effort. For them, the experiments are more convincing than the theoretical study.

Consequently, is not easy to teach math in applied sciences. Not only the curricula must be specific, didactic methods and tools must fit the given field. Even more, mathematicians involved must have some knowledge in the given field. In addition, sometimes the teacher must fight with negative preconceptions coming from the society.

In our talk, we deal with our efforts in the frame of our IPA HU-SRB/0901/221/088 project to improve the computer-aided and modeling-based teaching of Mathematics and Statistics at University of Szeged and University of Novi Sad. We present our results, and show some examples of the teaching materials developed. Finally, we try to formulate conclusions of the project, which can be useful for those colleagues who plan to do similar activities.