

Sergei Avdonin

Teaching Experience and Philosophy

I have gained my teaching experience in several different universities and in several countries. Working in the Flinders University of South Australia, I taught international students from underdeveloped Asian countries. Over a long period of years I taught in several Russian universities. I worked in the Department of Applied Mathematics of St. Petersburg State University, in the University of Economics and Engineering, and in St. Petersburg Technical University. As Head of the Department of Mathematics of the University of Economics and Engineering, I took charge of the seminars on pedagogy and I was involved in educational reorganization efforts in the University.

My teaching career in the US began in the University of Tennessee, Knoxville, where I worked as a visiting professor. In the Department of Mathematics and Statistics of the University of Alaska Fairbanks (UAF) I have given a variety of lectures and courses for both undergraduate and graduate students. During the last six years I have prepared and taught seven different graduate and six undergraduate courses.

During my teaching and research career I supervised many graduate students (five successfully defended Ph.D. theses, and more than ten M.S. projects). One of my main responsibilities at UAF was to strengthen the graduate program in the Department of Mathematical Sciences. I have recruited several strong students for the program. Currently at UAF I supervise three Ph.D. students, three my M.S. students graduated in 2005 – 2007.

Working at the University one serves an intellectual community of students. My goals for the community are excellence, intensity and enthusiasm in its activities. From personal teaching experience I know that the successful solution of this task is directly attributable to education of the whole person – the mind, the heart and the soul. The basic principle of my teaching philosophy is that each student should be able to reach his or her full potential, while teachers should strive to maximize each student's opportunities. This is especially important in teaching mathematics, because learning mathematics makes students better prepared for any future career, regardless of their abilities or career goals, wherever they will work - at Universities, in private companies or national laboratories, on Wall-Street, or in hospitals.

My teaching objective is to establish an effective feedback process with students. In trying to achieve this goal, I carefully select homework problems and provide weekly quizzes. Both homework problems and quizzes help students to consolidate theoretical knowledge and practice skills, and they provide me with well-timed information about their understanding of the course. If I see that students are performing poorly in one topic then that will be the topic we spend more time on.

In my teaching, I try to create in the student community an atmosphere of openness, or more precisely, an atmosphere that promotes dialogue and intellectual exchange. I do this in a number of ways. I encourage students to ask questions about all the concepts I present. I tell students in my classes that I will raise their final letter grade if they actively participate. I also tell students that I am usually in my office, and that they are always welcome to stop by, regardless of office hours. Finally, I repeatedly emphasize to students that it is my job to teach them, and that they should take full advantage of this. By all these steps, I show students that I take them, and their ideas, seriously. Following the traditions of liberal arts education, I emphasize critical thinking in my teaching. I ask students to examine carefully the proofs of mathematical results, and their interpretations, which provide them with models of critical thinking.