

What can you do with a Physics Education, in addition to becoming a Professor?

Cynthia Dion-Schwarz, Institute for Defense Analyses - Physics professors have often maintained that an education in physics will prepare you for just about anything. Certainly the numerical and computer skills of physics students are widely known. The broad “numeracy” of physicists regularly leads to positions throughout the financial world, and the computer skills are a basis for employment in essentially all areas. However, these are features of all technical educations. What a physics curriculum provides as well, through the understanding of classical physics and quantum mechanics, is the basis for quickly understanding the essential features of both the world around us, and the devices we use to negotiate that world. In addition, the physics culture values this ability for quick recognition, comprehension, quantification and explanation of the essential features of a situation.

This talk will feature examples of how physics arguments have influenced a number of major government programs by providing decision makers with a simple and clear yet technically sound understanding of the issues. The talk will include examples of current in problems in Defense that are subject to active research and debate. Many of these debates continue because the topics have eluded the recognition and explanation of essential features. We will conclude with a description and comparison of the work and ‘quality of life’ issues in the academic and defense industry.