

Designing a Course in Climate Change Science – For Science Majors and Other Stakeholders

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The science of climate and the public and scientific understanding of climate change has undergone tremendous interest of late, with IPCC reports, an Academy-Award and Nobel Prize winning film, controversies on data quality and model utilization, and political, economic, and social implications of climate and energy policy across the world. Today's educated citizen should be well informed about the role that science plays in society in general, and should be prepared to address more scientific matters up front.

This talk will focus on two threads – one is the desire to build public literacy at the K-12 level by including frank and direct discussions about weather and climate issues, and the role of the oceans in meteorology and climatology, at the high school level by incorporating benchmarks in these areas at the high school level. Florida's science standards have just undergone a major rewrite in 2008 and these new benchmarks include several new ones that are focused on just such issues. The fact that these are in benchmark language means that they will also be "testable" which means that they are likely to be taught in all public schools in the state, and this provides an incredible (but potentially expensive) opportunity for professional development for teachers – how are we as scientists and researchers going to be able to help the K-12 community address their fundamental lack of preparation for such discussions in their K-12 classrooms?

That motivates the second part of the talk – the creation of an appropriate climate change science class at the college level that can address the interests and needs of the science major as well as the education major (or the business/insurance/risk management/public policy...). We are going through the process now at FSU to develop such a course with meteorology and science education majors in mind, in the first instance, but we are hoping to get some good ideas from others on how best to approach the design of such a class, given the diverse mathematical and scientific backgrounds of potential student populations.

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