Seminar Series 2014 - 2015

Southern Ontario Centre for Atmospheric Aerosol Research University of Toronto

ENGINEERING FOR THE 21ST CENTURY: THE CHALLENGE OF SUSTAINABILITY

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The needs of society and ways to meet those needs are changing rapidly, as both global population and affluence rise. Engineering students currently being trained at many of the nation's universities are only now starting to learn about the new constraints of economic, social, and environmental sustainability in their programs. These constraints also affect the way professional engineering firms are responding to client needs, despite the fact that most practicing engineers have not been trained in sufficient depth to account for long-term changing availability of input resources and the need for reduced outputs of waste in their design of products and processes. In this seminar, we explore (1) the knowledge and skills future engineers must develop to be ready for the challenges of this century, (2) what engineering programs at U.S. colleges and universities are doing to prepare future engineers to meet these challenges, and (3) what the public does and doesn't understand about technology and the impacts of day-to-day decisions on environmental sustainability. This last topic is an area of active research.

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