

Special Seminar 特別セミナー 1

Bringing Natural Hazards Science to Society: The Role of the University

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Date and Time: 3月5日(月) March 5th (Monday), 13:00 p.m.~

Place: International Research Institute of Disaster Science (IRIDES) Seminar room on the 1st floor. 災害科学国際研究所 1階セミナー室

Understanding the causes and consequences of natural hazards is an important asset for a society. Although government affiliated agencies are generally responsible for the dissemination of hazard related information, such information can be best utilized by a knowledgeable society. In addition to the fundamental role it plays in hazards research, the university (and educational institutions in general) have a critical role to play in developing a “hazard-knowledgeable” society. It is important for students to have opportunities to improve their knowledge of such events, independent of their professional goals - familiarity with hazards is not just for scientists. In this presentation I will focus on the educational aspects of our activities related to Natural hazards. At Penn State University we have developed a suite of courses, focused on Natural Hazards, explicitly designed for different learning communities. Additionally these courses or derivatives from them have been successfully exported and implemented at universities both within the U.S. and internationally, and as short-courses globally. Courses are offered both on-campus in the face-to-face environment, and also on-line for both post-graduate professionals, and undergraduate learners. At the introductory level, for non-science majors, we offer Earth 101 - Natural Disasters: Hollywood versus Reality. This is a large-enrollment class (200+ students), that uses active learning, hands on activities, discussions and short film clips (both Hollywood-derived, and science based) to cover the scope of natural hazards and their consequences. For science, engineering and other technically-oriented students we offer an upper-level course in Natural Hazards, that brings the science to the topic and allows students via case studies to understand the underlying processes that produce disasters. This upper-level course is offered in 3 modes: (1) On-campus, for undergraduate science and engineering students; (2) On-line for this same pool of undergraduate students; and (3) On-line for post-graduate students in a Masters degree program (Health Professional focus), which allows health professionals and first responders to develop an understanding of the causes and issues of a disaster. Although these upper-level offerings carry the same course name, each has been modified to serve its delivery method and target student population. Details of the courses, examples of course activities, and the underlying course philosophies will be described. Through this suite of courses, approximately 500 students per year at Penn State (and more at other institutions) learn about key aspects of natural hazards - their causes, consequences, and potential mitigation, which will allow them to better utilize and respond to information on hazards provided by government agencies.