

2010 Advanced Summer School of Nuclear Engineering and Management with Social-Scientific Literacy

organized by
The University of Tokyo and University of California, Berkeley
in collaboration with Tokai University

Lectures and Discussions:

July 26 (Mon) – 28 (Wed), 2010
Room 802, Hawaii Tokai International College (HTIC)¹

Special Lecture & Workshop:

July 29 (Thu), July 30 (Fri) & August 2 (Mon), 2010
Room 801a, 801b, 802 & “Glen Grant Theater”,
Hawaii Tokai International College (HTIC)



Background, Motivation and Objective

In the past three years, Department of Nuclear Engineering and Management, University of Tokyo and Department of Nuclear Engineering, University of California, Berkeley have been carrying out collaboration for developing advanced educational programs for nuclear engineering. The collaboration, called GoNERI, has been funded by the Global Center of Excellence (G-COE) program of the Japan Society for the Promotion of Sciences (JSPS).

As one of the core parts of GoNERI program, special emphasis is placed on integrating nuclear science and engineering with social science. We recognize the particular relevance of social-scientific approaches to various perspectives of nuclear technology, such as nuclear fuel cycle, radioactive waste disposal, introduction for rising countries, and so on. It is imperative that the new generation of nuclear engineers understand societal aspects of nuclear technologies sufficiently to serve the public good. However, as faculty members and students in nuclear science and engineering, we do not yet have sufficient command of the fundamentals of the social sciences (such as their domain, concepts, terminology, methodology, etc.), which limits us in collaborating with social scientists. This must be corrected.

With such understanding, under the GoNERI program, efforts have been made to develop an innovative



education program by integrating nuclear engineering and social sciences, including a series of bi-weekly seminars and field trips to Waste Isolation Pilot Plant (WIPP), at Carlsbad, New Mexico, Toyo-Cho and Rokkasho-Mura, Japan. Also, we conducted the “2009 Advanced Summer School of Radioactive Waste Disposal with Social Scientific

Literacy.”

The objective of such prospective educational program is to provide students with an awareness of social

¹ See http://www.hawaiiokai.edu/modules/contents_trial_06/index.php?id=2. Pictures on this page are courtesy of HTIC.

science perspectives and the capability to put them to work in improving society's ability to make difficult and long-term decisions. We will do this by establishing a systematically integrated program for nuclear engineering graduate students. This summer school is planned and organized as an important milestone toward the goal.

Anticipated Participants

Graduate students and young professionals in nuclear engineering field.

Application

1. Download application forms and fill all the necessary information
2. Send the application forms by e-mail. Application deadline: June 14, 2010. Registration Fee: \$300
(Expenses for lodging, meals, transportation must be paid separately.)

Organizer

Global COE Program, Nuclear Education and Research Initiative (GoNERI) Program, The University of Tokyo, Japan & Department of Nuclear Engineering, University of California, Berkeley, USA, in collaboration with Global Initiative on Asian Specialized Nuclear Personnel Program, Tokai University, Japan (GIANT program)

Organizing Committee

Chair Shinya Nagasaki (UT) –Co-chair Tatsuhiro Kamisato (UT) – Co-chair Joonhong Ahn (UCB) – Satoru Tanaka (UT)

Agenda

Sunday, July 25, “Multi-purpose Reception Facility” (19th floor), HTIC

- 14:00 – 16:00 Registration
- 16:00 – 16:05 Welcome remarks: Prof. Shinya Nagasaki (UT)
- 16:05 – 16:20 Orientation: Mr. Koji Nakamura (HTIC)
- 16:20 – 17:30 Reception

Monday, July 26 [Lectures] Room 802, HTIC

- 8:30 – 9:00 Introduction: Prof. Tatsuhiko Kamisato (UT)

Topic 1 “Technology, Risk and Society: HLW Disposal Case” Chair: Prof. Joonhong Ahn (UCB)

- 9:00 – 9:30 Keynote lecture of the day: Prof. Joonhong Ahn (UCB)
- 9:30 – 10:15 **[Group Work]** Brainstorming

Coffee Break

- 10:30 – 11:45 **[Lecture 1]** “Risk Governance: Regulation and Technology” Dr. Mikael Jensen (SSM, Sweden)

Lunch

- 13:00 – 14:15 **[Lecture 2]** “Minorities and Radioactive Waste Disposal” Prof. Noriko Ishiyama (Meiji University, Japan)
- 14:15 – 15:30 **[Lecture 3]** “What If There's No Single Right Answer? History, Social Conflict, and Engineering Solutions” Prof. Cathryn Carson (UCB)

Coffee Break

- 15:45 – 17:00 **[Group Work]** Reflection from the lectures [Mentor in Chief: Prof. Takumi Saito (UT)]

Dinner

- 18:30 – 19:30 Presentations by student groups
- 19:30 – Free discussion

Tuesday, July 27 [Lectures] Room 802 HTIC

Topic 2 “Social Decision-making and Technology” Chair: Prof. Kohta Juraku (UT/UCB)

9:00 – 9:30 Keynote lecture of the day: Prof. Kohta Juraku (UT/UCB)

9:30 – 10:15 **[Group Work]** Brainstorming

Coffee Break

10:30 – 11:45 **[Lecture 4]** “Participatory Technology Assessment and the Role of Engineers” Mr. Akifumi Ueda (CSIJ, Japan)

Lunch

13:00 – 14:15 **[Lecture 5]** “Decision-making Process: Personal Decision-making and Social Decision-making” Prof. Kazuhisa Takemura (Waseda University, Japan)

14:15 – 15:30 **[Lecture 6]** “Managing Scientific Disputes in Public Policy” Prof. Kem Lowry (University of Hawai`i at Manoa)

Coffee Break

15:45 – 17:00 **[Group Work]** Reflection from the lectures [Mentor in Chief: Prof. Takaharu Fukuzaki (UT)]

Dinner

18:30 – 19:30 Presentations by student groups

19:30 – Free discussion

Wednesday, July 28 [Lectures] Room 802, HTIC

Topic 3 “Nuclear Technology in Global Context: Climate Change, Non-proliferation and Growth of Rising Countries” Chair: Prof. Shinya Nagasaki (UT)

9:00 – 9:30 Keynote lecture of the day: Prof. Shinya Nagasaki (UT)

9:30 – 10:15 **[Group Work]** Brainstorming

Coffee Break

10:30 – 11:45 **[Lecture 7]** “Technology and Global Politics: Non-proliferation Perspective” Prof. Jacques E. C. Hymans (University of Southern California, USA)

Lunch

13:00 – 14:15 **[Lecture 8]** “Nuclear Technology and Energy Politics/Policy” Dr. Hiroshi Kuniyoshi (METI, Japan)

Coffee Break

14:30 – 15:45 **[Group Work]** Reflection from the lectures [Mentor in Chief: Mr. Mitsuaki Hosono (NISTEP, Japan)]

Coffee Break

16:00 – 17:00 Presentations by student groups

Dinner

18:30 – Free discussion

Thursday, July 29 [Lectures & Workshop] Room 802, HTIC

Theme “Technology and International / Regional Cooperation” Chair: Prof. Tatsuhiro Kamisato (UT)

9:00 – 10:15 **[Lecture 9]** “Nuclear Siting and Response from the Society in Rising Countries” Prof. Sulfikar Amir (Nanyang Technological University (NTU), Singapore)

Coffee Break

10:30 – 12:00 **[Special Lecture]** “Nuclear Technology in Europe” Prof. David Cope (POST, UK)

12:00 – 12:30 Free discussion

Lunch

13:30 – 17:00 **[Exercise of Case Study]** “Technology Transfer and the Role of Engineers: ESCO case in China” Prof. Hideyuki Horii (UT) with Mentor in Chief: Mr. Shunsaku Komatsuzaki (UT)

Dinner

18:30 – Free discussion

Friday, July 30 [Workshop] Room 801a, 801b & 802, HTIC

Workshop “Nuclear Engineers in Society”

8:30 – 10:30 **[Group Work]**

Coffee Break

10:45 – 11:45 Preliminary presentations

Lunch

13:00 – 15:00 **[Group Work]**

Coffee Break

15:15 – 17:30 **[Group Work]**

18:00 – 19:00 **Dinner at “Multi-purpose Reception Facility”, HTIC** [Greetings: Prof. Shinya Nagasaki (UT)]

19:00 – 20:00 After-dinner talk: “Nuclear Development and Non-proliferation” Prof. Kenkichi Hirose (Tokai University, Japan)

Monday, Aug. 2 [Workshop] Room 801a, 801b, 802 (Group Work) & “Glen Grant Theater” (Final Presentation), HTIC

Workshop “Nuclear Engineers in Society” (cont.)

8:30 – 10:30 **[Group Work]**

Coffee Brea

10:45 – 11:45 **[Group Work]**

Lunch

13:00 – 15:30 Final presentations

Coffee Break

16:00 – 17:30 Free discussion

17:30 Concluding remarks: Prof. Joonhong Ahn (UCB)