Department of Nuclear Engineering, University of California at Berkeley

Nuclear Engineering 24, Section 2
Society, Environment, and Nuclear Power

Monday 3:00-4:00, 321 Haviland Hall (1 unit, PF)
CCN: 64006

Instructor: Prof. Joonhong Ahn, 4157 Etcheverry Hall, 642-5107, ahn@nuc.berkeley.edu
Office Hours: 1-3 pm, Wednesday

Course Objectives: Lectures and discussions will be made on societal aspects of nuclear power utilization, for such topics as environmental impacts and safety of geologic disposal for radioactive wastes, development of societal agreement, and political, institutional, and historical insights on nuclear power utilization. Keynote lectures by the instructor and invited speakers from outside will be given. Students will select a topic of interest, and contribute to class discussions.

Week	Day	Contents
1	1/26	Introduction; Class organization; General overview of nuclear technology
2	2/2	(Topic 1) Nuclear technology and developing countries
3	2/9	(Topic 2) Low level radioactive waste issue in California and US
4	2/16	(Holiday)
5	2/23	(Topic 3) Yucca mountain repository
6	3/2	(Topic 4) Societal decision making and waste issues
7	3/9	(Topic 5) Nuclear engineering and engineering ethics
8	3/16	Presentations and discussion by students (Topic 1)
9	3/23	(Spring Recess)
10	3/30	(No class)
11	4/6	Presentations and discussion by students (Topic 2)
12	4/13	Presentations and discussion by students (Topic 3)
13	4/20	Presentations and discussion by students (Topic 4)
14	4/27	Presentations and discussion by students (Topic 5)
15	5/4	Cross-cutting discussions
16	5/11	Concluding remarks and discussions by Prof. Ahn

- Each lecture focuses an interesting topic in socio-technological and environmental issues in nuclear technology applications for about 35 minutes, followed by a Q&A session.
- Students will choose one topic for further self-studies. Each lecture will introduce reading materials. Students can study those for their self-studies, or they can find other literatures by themselves.
- Based on their self-studies, they will prepare presentations for each topic individually. Other students will participate in discussions after these presentations.

Grading: Attendance (1/3); Participation in class discussions (1/3); Presentation (1/3)

Presentation will be graded on (1) Accuracy (Are the basic facts correctly presented?); (2) Organization (Are the objectives and conclusions succinct?); (3) Visual aids (Quality of presentation materials); (4) Response to questions and comments; (5) Overall presentation quality.

Joonhong Ahn is Professor of Nuclear Engineering at UC Berkeley, where he has taught since 1995. He holds a Ph.D. from UC Berkeley and a D.Eng from the University of Tokyo, where he has recently been named Fellow of the School of Engineering. He teaches undergraduate and graduate courses in radioactive waste management, covering broad aspects of radioactive waste management as well as safety assessment aspects of deep geologic repositories. He is a member of the Nuclear and Radiation Studies Board, National Academies.