Sloan Career Cornerstone Center

Profiles of Nuclear Engineers

Denis E. Beller, Ph.D.

Research Professor

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Education:

- Ph.D., 1986 Purdue University
- M.S.N.E. (nuclear weapons effects), 1981 U.S. Air Force Institute of Technology
- B.S.Ch.E., 1976 University of Colorado

Job Description:

Direct and conduct local, national, and international research projects to develop technology to recycle and reuse used nuclear fuel and to reduce the radiotoxicity and volume of its waste as well as its attractiveness for proliferators or terrorists.

Comments:

Nuclear engineers have demonstrated that they can work in a wide variety of fields, or easily convert to other fields if the need arises.

Advice to Students:

Be involved in something, and take a leadership role, even if it's just the cookies and milk committee for your student section. In addition, don't take your professor's word for anything; always try to see things from the other side.

Interview Segments

- Q: When did you know you wanted to become a Nuclear Engineer?
- Beller: The U.S. Air Force offered me the opportunity to earn a fully sponsored Masters degree rather than leave the service. I learned about nuclear energy and other technologies while learning about nuclear weapons effects.

- Q: What was your college experience like?
- Beller: Very focused and disciplined, married with two children, USAF sponsored (all 3 degrees).

▶ Q: Did you co-op while you were an undergrad?
▶ Beller: No, I went to school full-time twelve months a year.

▶ Q: How did you get your first job?
▶ Beller: I was drafted during the Vietnam War, and joined the USAF in 1971 because it appeared to offer the best chance of all the armed services to continue my education. I made a wise decision.

▶ Q: What's the most rewarding thing about being a Nuclear Engineer?
▶ Beller: Knowing that I am educating students and conducting research to provide clean, affordable, reliable, environmental, safe and secure, and sustainable energy for six to nine billion people.

▶ Q: Do you spend a fair amount of time traveling?
▶ Beller: Yes. I work about half time for ISU's Idaho Accelerator Center, where I direct an international project with accelerator-driven experiments at ISU, Univ. of Texas at Austing, and Texas A&M University (next year).

▶ Q: Do you have a mentor? Or did you in your college years?
▶ Beller: Not officially, just several respected professors and a couple of professionals.

▶ Q: Do you find yourself working more in a team situation, or more alone?
▶ Beller: Team, either with other faculty members or students.

▶ Q: Do you find you are able to balance work with social/family life while working in your current job?
▶ Beller: Yes, although it is a challenge.

▶ Q: If you had to do it all over again, would you still become a Nuclear Engineer?
▶ Beller: Definitely, but I would have done it earlier.

▶ Q: Did you think that school prepared you for the way the work gets done in the real world?
▶ Beller: No, but that's not what school is supposed to do. It is supposed to give you the tools you need so that you can do work in the real world.

▶ Q: Where do you see jobs for Nuclear Engineers in the future?
What should students be doing to prepare themselves to take on those roles?
▶ Beller: Nuclear engineers have demonstrated that they can work in a wide variety of fields, or easily convert to other fields if the need arises. Concentrate on your studies, do a thesis or research project, get involved in professional and community activities, and build up a network of professional contacts.

▶ Q: What other advice do you have for students?
▶ Beller: Be involved in something, and take a leadership role, even if it's just the cookies and milk committee for your student section. In addition, don't take your professor's word for anything; always try to see things from the other side. You will be challenged, and you can face that challenge much better if you've thought of all sides of an issue.