
CE 591 Environmental Engineering Seminar

Nuclear Power – Enabling a Sustainable Future

Description

This presentation will review the basic physics and technology of nuclear power. The centrality of design philosophy in assuring safe reactor operation will be stressed. Some perspectives on radiation and other risks will be discussed. Issues of sustainability will be addressed from the perspectives of fuel availability, economics, and waste treatment. Lastly, the question of “could nuclear power be the key to a ‘carbonless’ hydrogen economy?” will be briefly considered.

Who Should Attend

Graduate students registered for CE591 (All Disciplines), outside professionals seeking information and PDH credit, and the general public with interest in how engineers are meeting the challenge of sustainable design.

Format of Course

6:30 p.m. – 7: 30 p.m. *Lecture and Q/A Session*

7:30 p.m. – 8:30 p.m. *Class Project* – students work individually or in groups on in-class assignment

8:30 p.m.-9:30 p.m. *Review* previous week assignment and provide current week assignment

Date and Location

April 30, 2009

Salisbury Lab – RM 305 WPI Campus

Registration Information

Professional Development Registration:

\$50 *Lecture Only* CRN 27977 CESUS14

\$150 *Lecture and Class Project* CRN 27991

CESUS14 -- 2 Hrs PDH's Awarded

Graduate Course Registration:

CRN 27162 – 3 Credits Awarded

About the Speaker



Dr. Robert N. Katz is currently Research Professor of Materials Science and Engineering at Worcester Polytechnic Institute. Previously he was the Norton Professor of Materials Science and Engineering. He was the Chief Technologist at the Army Research Laboratory - Materials Directorate at Watertown, from 1987 through 1995, and was chief of the Ceramics Research

Division there from 1970 through 1987.

Dr. Katz is internationally recognized as an expert in the development of advanced ceramics and ceramic composites and their application in areas of both military and civilian importance, including; ceramic composite armor, missile guidance domes, cutting tools, bearings, and most especially heat engines. His research interests include: high strain rate properties of ceramics, tensile testing of ceramics and ceramic matrix composites, design with brittle materials, and technology assessment.

He played a major role, as a committee member, in the National Research Council's STAR 21: Strategic Technologies for the Army of the 21st Century study and report. Dr. Katz has authored or co-authored over 100 major technical papers and presented invited keynote papers at major international conferences in the US, UK, Israel, Italy, Japan, and Australia. He was on the editorial board and was the North American Coordinator for the Journal of the European Ceramic Society.

For more information or to register call 508-831-5517. Graduate students may register at: <http://www.wpi.edu/Admin/Registrar/course056.html>; others may register through <http://cpe.wpi.edu/Individual/Workshops/regform.html>