

## A Design and Project-Oriented Innovative Electrical Engineering Program at the University of North Texas

## Professor Murali Varanasi Electrical Engineering Department Chair, UNT

11am, Tuesday, Feb 17, 2009 ECSS 2.102 (TI Auditorium)

This presentation is an overview of the innovative Electrical Engineering program at UNT. Unique features of the program include:

- Focus on active learning and Learning to Learn.
- Integrate business approaches relevant to Engineering in the curriculum
- Partnership between University and Industry in teaching project-oriented laboratories.

To address the first goal, we have developed a course in Learning To Learn (L2L), which is based on sound cognitive and pedagogical techniques that improve learning outcomes and make lifelong learning habitual. Students will develop an understanding of how engineering is learned and how we can facilitate and encourage the lifelong learning process. Topics covered include: consciousness and self-awareness, meta-cognition, learning styles, design, memory, language, reading, writing, problem solving, creativity and biology of learning.

The second goal is addressed by working jointly with the Department of Management at UNT's College of Business Administration. Two courses MGMT 3830 Operations Management and MGMT 3850 Entrepreneurship are developed for students in Electrical Engineering Department. Toward the third goal, we have developed project courses in the areas of Communications, Signal Processing, Electronics, Sensor Networks, Computer Vision, Digital Systems and VLSI Design. We are requesting ABET accreditation for the program during the 2009 – 2010 academic year.

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Murali Varanasi is Professor and Chair of the Electrical Engineering Department at the University of North Texas. He received his PhD in Electrical Engineering from the University of Maryland. His research interests include digital communications and coding theory, fault-tolerant computing, sensor networks and very large-scale system integration. Varanasi's awards include the University of South Florida's Professorial Excellence Award and the Florida Engineering Society's Outstanding Engineering Educator Award. He has also received the Computer Society's Meritorious Service Award, Outstanding Contribution Award, and Golden Core recognition. An IEEE Fellow, Varanasi received the IEEE Third Millennium Medal. He has also received the Distinguished Service Award from the University of South Florida and the 2004 Richard E. Merwin Award from the IEEE Computer Society. Varanasi is an active member of IEEE Educational Activities Board serving as a member of the Accreditation Policy Council (APC). He is also serving as Past-President of CSAB Inc.

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