Advanced Topics in Optical Fiber Telecommunications
EE290F, Spring 2004 (3 units)

Instructor: Dr. Ivan Kaminow, Visiting McKay Professor
Course Control Number: 25751
TuTh 12:30-2pm, 299 CORY

Advanced study of optical fiber telecommunications through regular seminars (twice/week) on topics to be selected with advice of students from chapters in "Optical Fiber Telecommunications IV A&B," Ivan Kaminow and Tingye Li, eds., covering current progress in Components, and Systems & Impairments. Students will participate in discussions on selected chapters during the term. Seminar chapter introductions will be presented by Ivan Kaminow, and he will moderate the discussions. A possible final assignment might include a system or component design outline by small groups.

Prerequisites: EE 122 or equivalent courses recommended.

About the Instructor: Dr. IVAN KAMINOW, visiting McKay Professor of EECS
Ivan Kaminow retired from Bell Labs in 1996 after a 42-year career (1954-1996), mostly in lightwave research. At Bell Labs, he did seminal studies on electrooptic modulators and materials, Raman scattering in ferroelectrics, integrated optics (including titanium-diffused lithium niobate modulators), semiconductor lasers (including the DBR laser, ridge waveguide InGaAsP laser and multi-frequency laser), birefringent optical fibers, and WDM lightwave networks. Later, as Head of the Photonic Networks and Components Research Department, he led research on WDM components (including the erbium-doped fiber amplifier, waveguide grating router and the fiber Fabry-Perot resonator), and on WDM local and wide area networks. He served as IEEE Congressional Fellow on the staffs of the House Science Committee (Minority) and the Congressional Research Service (Science Policy Research Division) in the Library of Congress from ’96-'97. From ’97 to ’99, he returned to Lucent Bell Labs as a part-time Consultant. He also established Kaminow Lightwave Technology to provide consulting services to various companies and patent law firms. In 1999 he served as Senior Science Advisor to the Optical Society of America in Washington. He continues to consult and to serve on a number of technical committees.

He received degrees from Union College (BSEE), UCLA (MSE) and Harvard (AM, Ph.D.). He was a Hughes Fellow at UCLA and a Bell Labs Fellow at Harvard. He has been Visiting Professor at Princeton, Berkeley, Columbia, the University of Tokyo, and Kwangju University (Korea). He has published over 240 papers, received 47 patents with 4 pending, and has written or co-edited 5 books, the most recent being “Optical Fiber Telecommunications IV A&B,” co-edited with Tingye Li and published in March 2002. Kaminow is a Life Fellow of IEEE (Institute of Electrical and Electronic Engineers), and Fellow of APS (American Physical Society) and OSA (Optical Society of America). He is the recipient of the Bell Labs Distinguished Member of Technical Staff Award, IEEE Quantum Electronics Award, OSA Charles Townes Award, IEEE/LEOS/OSA John Tyndall Award and IEEE Third Millennium Medal. He is a member of the National Academy of Engineering, a Diplomate of the American Board of Laser Surgery, and a Fellow of the New York Academy of Medicine.