POLLUTION PREVENTION
FACULTY AND PROGRAMS:
ARCHITECTURE AND DESIGN
The Building Technology Program at MIT is carrying out research on indoor air quality, efficient ventilation strategies, and advanced materials for building systems which minimize environmental pollution. There is a Master's and Ph.D. program in Building Technology. Courses emphasize energy efficient operation. For example, they teach students to research and use efficient ventilation strategies using displacement ventilation techniques. The result is that for the same volume of air circulated, the building inhabitant is exposed to a smaller concentration of pollutants. They also are looking at insulation which does not use CFC or CFC-derivative products.

The American Institute of Architects (AIA) was founded in 1857 to represent the professional interests of America's architects. As members of the AIA, more than 56,000 architects and allied members of the construction industry express their commitment to the highest standards in design and livability in our nation's buildings and cities. The AIA strives to meet the needs and interests of the nation's architects and the public they serve by developing public awareness of the value of architecture and the importance of good design. The Committee on the Environment (COTE) is the AIA's forum for the compilation, exchange, and dissemination of environmental information integral to design and the practice of architecture. Members provide the volunteer resources and expertise to fulfill its mission to help guide architects towards solid ecological and economic decisions. COTE works to create sustainable buildings and communities by advancing, disseminating and advocating environmental knowledge and values to the profession, industry and public. The 1996 edition of the AIA's Environmental Resource Guide represents a comprehensive compendium of information on environmentally responsive design with a life-cycle focus on the environmental effectiveness of building materials.

Teaching centers on the development of an architecture that is self-sustaining—architecture that recycles its wastes, purifies its water and attempts to perfect passive energy processes. The building material is essentially liquid held between membranes by atmospheric pressure. Dr. Katavolos is a member of NEWMOA.
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The University of Colorado’s Joint Center for Energy Management addresses the following areas: energy management; renewable energy; energy production and its environmental impacts; indoor air quality; energy system controls; and energy system simulation activities. The University offers a Graduate program focusing on these topics.

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Dr. J.J. Kim teaches in the area of Environmental Technology. Research and teaching topics include: building ecology, lighting, daylighting, building energy conservation and intelligent buildings. Dr. Kim is overseeing the development of a Sustainable Architecture Compendium for the National Pollution Prevention Center. This resource is due to be released in November 1997. The disciplines of Architecture and Design are explored in this compendium in the context of environmental sustainability and pollution prevention through the following modules: Sustainable Design, Building Materials, Environmental Cost of Building, Recycling and Reuse of Building Materials, and Case Studies in Sustainable Architecture.

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Teaching and research on the subject of energy and buildings, especially concerning architectural electric and daylight lighting, passive heating and cooling design, and environmental systems design.

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Since decisions made during the design process can drastically affect a product’s environmental impact, he has been looking at ways to augment the design methodology and subsequently minimize this impact. Efforts have centered on electronic design, but they could be applied to other designs as well. Rather than develop a separate course, he has integrated the concepts into the standard course offerings.
Has been teaching in the Industrial Design Department since 1963. Teaches a course which examines the
ccontent and causes of today’s ecological problems and formulates ethical responsibility both as citizens/
consumers and designers/artists. Uses field trips, guest lecturers, field research, and discussions to include
environmental impacts in developing design and artistic processes. Also teaches electives and studios which
emphasize this ethic.

Within the framework of the Industrial Design Curriculum, Dr. North’s objectives are to create a social
awareness that aims for design solutions that can be recycled, reused, or are biodegradable. For this reason,
he is quite interested in materials that promote these qualities so that industrial designers can specify these
materials for appropriate and more environmentally friendly alternatives. Unfortunately, commercial
interests are not quite ready to share this information and the bits and pieces that are available are rare. The
production in general is structured to meet conventional mass production methods driven by monetary gains
and not by environmental benefits or respect for future generations. The economists have not yet discovered
or don’t want to discover that the social costs of private enterprise are just another form of shifting tax
burdens to the consumer.

Dr. Parrott works in a variety of public education programs through Cooperative Extension emphasizing
household pollution prevention, especially indoor air quality, water quality, and waste management. She
also teaches environmental issues in housing and interior design to undergraduate and graduate students.

Teaches liberal arts and interdisciplinary courses which examine the content and causes of today’s ecologi-
cal problems and formulates ethical responsibility both as citizens/consumers and designers/artists. Uses
field trips, guest lectures, field research, and discussions to address environmental issues in developing
design and artistic processes.