Lecturers for QMRA II

Expert	Expertise	Affiliation
Engineers		
Dr. Patrick Gurian	Dr. Gurian has developed integrated model of exposure, risk, and impacts of alternative regulatory options for multiple drinking water contaminants and is Co-PI of an NSF-sponsored study of risk management for extreme events affecting the U.S.-Mexico border-crossing infrastructure. He has been involved in two studies of the public perception of technological risks, one addressing the perceived risk of wastewater reuse and one addressing the perceived risk of carbon monoxide poisoning, and a third study concerning Bayesian hierarchical modeling of the occurrence of contaminants in drinking water. He has developed a biosolids risk tool.	Drexel University
Dr. Charles N. Haas	Dr. Haas was one of the first scientists to examine dose-response data sets for microbial agents spread through environmental means and implement a quantitative risk framework following the NAS. He was the primary editor behind the book on Quantitative Microbial Risk Assessment. He has interacted with EPA in regard to disinfection and rules for development of the Surface Water Treatment Rule. He has examined outbreak data, inhalation, ingestion and contact exposures. Dr. Haas has been a member of several National Research Council committees dealing with bioterrorism. He served on a panel to review the EPA research strategy for homeland security protection of water and wastewater infrastructure He is currently serving on a committee to define "how clean is safe" following clean up from a bioterororist event.	Drexel University
Dra. Blanca Jiménez Cisneros	Dr. Jiménez is an expert in wastewater treatment and recycling, biosolids and the urban water system. She has authored more than 180 papers on topics of environmental pollution including causes, effects and technology; urban water processes and interactions and international water reuse issues. She has also made important contributions to books edited by the World Health Organization (WHO), UNESCO, IWAP and the American Water Works Association. She has 5 patents, all of them transferred and in use in Mexico in water and wastewater treatment plants. She has been actively participating in the wastewater or sludge norms of Mexico, Guatemala and South Africa and was also actively involved in the production of the water and sludge agricultural reuse criteria produced by WHO.	Investigadora Titular/Sr Researcher Instituto de Ingenieria, UNAM
Dr. Jade Mitchell-Blackwood	Dr. Mitchell-Blackwood conducted her graduate research under the Center for Advancing Microbial Risk Assessment (CAMRA). She developed Bayesian hierarchical dose –response models for both inhaled and ingested pathogens. She interacted with the US Army Public Health Command in regard to the development of the Biological Military Exposure Guidelines (BMEG) for *Bacillus anthracis*. She has also integrated QMRA into a decision framework for anthrax risk, demonstrating a novel approach to evaluating risk management alternatives. Her research expertise in decision modeling for risk management also includes the development of risk ranking algorithms for management of chemical and microbial stressors in	USDA

	multimedia environments (i.e air, water and food) through post-doctoral work with the EPA in the National Exposure Research Laboratory and with the USDA Food Safety Inspection Service.	
	Scientists	
Dr. Joan B. Rose	Dr. Rose, PI (MSU) has worked with Dr. Haas since 1988 and is a co-editor along with Dr. Haas of the only book on QMRA, *Quantitative Microbial Risk Assessment,* (John Wiley and Sons, NY, NY, 1999). She has worked on methods and transport assessment for bacteria, parasites and viruses in water while advancing the use of new genomic tools. She has extensive experience monitoring water and full-scale treatment facilities for pathogens. She has been involved with EPA and development of the methods and data for support of various rule- making including the *Enhanced Surface Water Treatment Rule* for *Cryptosporidium*. More recently she has been focusing on climate, water quality and health impacts.	Michigan State University
Dr. Nick Ashbolt	Dr. Ashbolt is an environmental microbiologist with expertise in hazard characterization in water systems including water distribution systems. He has worked with the international community, WHO and EPA in advancing data and models for QMRA that have changed international water guidance and regulations. He has been particularly engaged with recreational waters and risks associated with non-point source pollution, and *Legionella* risks via water aerosols.	U.S. EPA
Dr. Joe Eisenberg	Dr. Eisenberg is an expert in the area of microbial risks and the study of disease transmission models for water. His current research interests include the development of environmental-infection-transmission models for waterborne pathogens. He has been involved in examining impacts and approaches for controls for environmentally transmitted agents and serves as an advisor to both the national and international communities of public health professionals.	University of Michigan
Dr. Charles P. Gerba	Dr. Gerba is well known for his research on virus transport in water. He has been involved in survival and transport studies; evaluation of point-of-use (POU) disinfection and prototype devices for UV disinfection. He has developed methods for assessment of pathogens in water and quantifying dispersion of biological agents in aerosols from application of biosolids and domestic environments. He is PI of the Environmental Dispersion of Biological Agents in Sewer systems study for DARPA and a study on alternatives for chlorine disinfection of water supplies for the Dept. of Homeland Security SARPA He is also studying the dispersion of spores in drinking water distribution systems.	University of Arizona