

Ecosystem Health Program

Beyond Patient Health

Escalating populations, expanding urban environments, poverty, pollution and globalization adversely affect the world's ecosystems and bring new diseases and new health challenges. The rapidly growing field of ecosystem health has emerged from these realities, expanding an area of study that emphasizes the interconnections between politics, social structure, the physical environment and the human condition.

What is the Ecosystem Health Program?

- Cross-disciplinary effort established in 1997 to reshape approaches to medicine and incorporate ecosystem and community concerns into medical school curricula
- Helps medical students recognize ecological decline is largely a result of human action and that this decline affects our well-being
- Teaches students to examine emerging environmental, economic and health problems, and to not just consider the health of the patient, but the health of the community, population and planet

Ecosystem Health Education at Western

- Embraces an integrated approach, bringing together the natural, social and health sciences and incorporating medical, physical, socio-political, ecological and economic perspectives into medicine
- Curriculum stresses a patient-centred strategy, encouraging physicians to examine patients' problems in the context of their environment
- Students use case-based methods to look at such relevant issues as E. Coli outbreaks, bovine spongiform encephalopathy, West Nile virus, antibiotic resistance, ozone depletion, asthma and heavy metal toxicity
- The program also supports student and faculty fellowships and an endowed Chair in Ecosystem Health
- The Department of Biology offers undergraduates a Major in Ecosystem Health, which exposes students to experimental and theoretical approaches to ecosystem health, and to economic factors and policies that affect how people interact with their environments
- The Program's members have partnered with the *International Society for Ecosystem Health*, which is housed on campus, to offer an *International Course in Ecosystem Health* to students beyond Western

Research

- **Beryl Ivey Chair for Ecosystem Health:** a joint appointment between the Schulich School of Medicine & Dentistry and the Faculty of Science, held by Charles Trick, an expert on ocean and freshwater ecosystems
- The Chair's role is to advance the program's research projects and examine how global welfare and sustainability relate to human health
- The Chair also leads the development of the ecosystem health curriculum in the Faculty of Science and Schulich School of Medicine & Dentistry
- Trick and collaborators have established the *Ecosystem Health Research Group*, a multidisciplinary team including cultural anthropologists, toxicologists and physicians investigating environmental projects of significant concern
- The group has been involved in studies ranging from the impact of pesticides and fertilizers on Lake Naivasha in Kenya to the effects of long-term contaminant exposure on Walpole Island First Nations people
- The *Ecosystem Health – Africa Initiative* examines shifting ecological factors affecting health in Lake Naivasha, which has grown from 19,000 people to 400,000 today because of the introduction of floriculture



The innovative Ecosystem Health Program drives research and teaching efforts related to the interconnections between the environment and health, including in Lake Naivasha, Kenya.



Western
Research