WVLC
UN Water Virtual Learning Centre

... An Initiative of UN DESA and UNU supported by the UN Development Account

UNU International Network on Water, Environment and Health (UNU-INWEH)

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UN "Water Virtual Centre" Aims to Improve Water Management Worldwide

"Educational programming like that offered through the UN Water Virtual Learning Centre is unique not just within UN University, but the UN system as a whole. It fits in well with our global efforts to develop open-source and distance learning opportunities."

Prof. Konrad Osterwalder, UN Under Secretary-General and Rector of UNU

"We need a huge number of trained professionals and managers to help meet the Millennium Development Goal - of halving by 2015 the number of people without safe water or sanitation facilities. This distance-learning programme offers a direct response to this need. We think that this programme provides authoritative materials, customized to local needs and conditions."

Dr. Zafar Adeel, Director UNU-INWEH

Overview:
In an effort to broaden the availability of safe water worldwide, the United Nations has created a unique new virtual 'academy' to teach the fundamentals of integrated water management on a global level. UNU–INWEH, in partnership with UNDESA and supported through the UN Development Account, has developed a distance education programme on Integrated Water Resource Management (IWRM). The curriculum is designed for adult professionals, usually with undergraduate degrees but with little or no training in IWRM. Created with material from over 60 international sources, the 10-subject, 250-hour program (ranging from hydrology and the water cycle to good governance and community participation) offers successful graduates an academic Diploma from the United Nations University.

For whom:
The WVLC will be of greatest immediate benefit to engineers, district managers, government administrators and others responsible for water management at the national and regional level who wish to upgrade their knowledge of modern water management concepts and principles. Other individuals may take the course as part of a self-directed learning experience.

Where:
The program is offered through WVLC Regional Centres within affiliated institutions in Africa, Asia, the South Pacific and Central America, eventually expanding worldwide.

For more information: http://wvlc.uwaterloo.ca or www.inweh.unu.edu

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"Many practicing professionals simply can't take time off to pursue a two-year course or even a two-week course. Distance education has become very successful because it allows people to participate as part of their on-the-job training. Designing the WVLC for global delivery has been a difficult challenge but the payoff will be improved water management and, potentially, improved health for many people suffering from water shortages and poor water quality in developing countries."

Mr. Manuel Dengo, Former Chief, Water Resources Management Branch, UN-DESA

"It is estimated that half of all illnesses in developing countries at any given time are water related. We have an obligation to do whatever we can to make water accessible and safe for people in less fortunate countries."

Prof. Colin Mayfield, Assistant Director, UNU-INWEH

The curriculum includes:

COURSE 1 : Introduction
A basic introduction to the fundamental concepts of integrated water resources management and the techniques and knowledge required to understand and manage water resources.

COURSE 2 : Water transfer
A basic understanding of the hydrologic cycle; processes and measurements; the factors affecting movement and behaviour in different environments; surface and groundwater environments; the watershed concept; and the impacts of weather and climate.

COURSE 3 : The terrestrial ecosystem and the impacts of land-use changes
Fundamental ecological concepts; the role of the natural environment in the hydrologic cycle; the effects of changes in land use on water processes; the impacts of water on land; tools of watershed analysis; aspects of land-use planning, control and conservation.

COURSE 4 : The aquatic ecosystem
The basics of the physical, chemical, biological and ecological aspects of streams, rivers, lakes, wetlands, estuaries and groundwater systems.

COURSE 5 : Aquatic ecosystem health and impact assessment
The impacts of human activities on the aquatic environment and the methodologies for measuring such impacts.

COURSE 6 : Water use
Human water uses and their impacts; water consumption and aspects of public water supply.

COURSE 7 : Wastewater
Problems resulting from point and non-point pollutant discharges; waste treatment processes; best management practices, monitoring and assessment approaches; and urban versus rural environments.

COURSE 8 : Governance and community based approaches
The concepts and practices of community-based water resources management; domestic and international governance, community involvement and gender issues

COURSE 9 : Organizational infrastructure and management
Issues, challenges and approaches to finance, budget, infrastructure, management and planning, as well as public health administration and project management.

COURSE 10 : Applying Integrated Water Resources Management :
Customized case studies, practical illustrations of the concepts and practice of IWRM, and investigative techniques for students to assess their own IWRM needs, conducted in tutorial format.

The WVLC collaborating centres worldwide will create regional case studies and other regional content, mark individual course tests and proctor a final examination. In future, specialized courses will be given by other UN and UNU institutions – for example, courses on water leadership and governance, drinking water contamination, hydrology, and decision-support technologies.

Leading water scholars and practitioners have vetted the courses, which were also assessed by a Canadian-based graduate student panel from around the world. Feedback was constructive and very positive.