



International Centre of Excellence in
Water Resources Management



Graduate Certificate in Water Resources Management

The International Centre of Excellence in
Water Resources Management

WaterEd Australia Pty Ltd

www.icewarm.com.au



An Australian Government Initiative

Tomorrow's Water Industry

The future management of sustainable water resources for all uses, including water supply and sanitation, is dependent on one factor above all others: people with appropriate knowledge and skills. The growing pressures on water quantity and quality have contributed to an increase in the range and complexity of jobs in water management and water-related industry, placing a greater emphasis on education and training. Multi-disciplinary and flexible approaches to water education are critical in delivering the appropriate skills to our future water leaders.

The International Centre of Excellence in Water Resources Management (ICE WaRM) brings together a national network of education institutions and industry bodies to deliver a diverse range of high quality programmes. This award-winning suite of Water Resources Management programmes developed by ICE WaRM is targeted at current working professionals seeking to upgrade and update knowledge and skills, as well as recent graduates planning to undertake postgraduate studies leading to a career in the water industry.

Postgraduate Programmes

ICE WaRM offers postgraduate programmes on three levels of study - Master, Graduate Diploma, and Graduate Certificate. These programmes offer a unique blend of cross-institutional and cross-faculty study providing students with access to a wide range of expertise, resources and state of the art research facilities in the broad field of water resources management.

This collaborative programme offers a wide selection of specialised coursework electives and study options enabling students to create a programme of study that meets their individual needs.

Aims

The Graduate Certificate in Water Resources Management is designed to provide students with the underpinning knowledge for a career in water resources management and to continue further studies in water resources management. Upon successful completion of the Graduate Certificate in Water Resource Management, students may articulate to the Graduate Diploma in Water Resource Management at the discretion of the Programme Director.

Content/Structure

The Graduate Certificate in Water Resources Management requires the completion of four core courses (equivalent to one semester of full-time study). Domestic students also have the option of studying part-time. Students studying full-time can select two core courses and two coursework electives with the approval of the Programme Director.

Entry Requirements

Applicants must fulfil the following requirements for entry into the Graduate Certificate in Water Resources Management.

Completion of:

- 3 year undergraduate degree in a recommended field* (Australian or equivalent)

OR

- Extensive work experience in the water industry**.

*Engineering and Science are considered recommended fields.

**Applications in this category need to be assessed on a case by case basis and entry is not guaranteed.

Professionals with extensive experience working in the water industry who do not meet the academic entry requirements may be eligible for entry to the Graduate Certificate. Relevant experience will need to be demonstrated to an appropriate level and will be assessed at the discretion of the ICE WaRM Programme Director.

English Language Requirements

International students who speak English as a foreign language must have obtained one of the following standards within the last two years prior to admission:

- International English Language Testing System (IELTS): test - band 6.5 with a score no less than six for sub-tests;

OR

- Previous successful secondary or tertiary study where English was the language of instruction.

It is assumed that all applicants will have a demonstrated background in mathematics (at least equivalent to year 12 mathematics e.g. Mathematical Studies in South Australia). Course prerequisites indicate where a higher mathematical ability is required.

Partner Universities



Programme Content & Structure

CORE COURSE CONTENT

(Complete the following four courses)

Global Water Systems I (Natural Water Cycle)

Provides an understanding of global water issues and their interaction between the water cycle and aquatic ecosystems. It also provides insights into the challenges of water usage for health and wellbeing, protecting ecosystems and the competing needs in urban, rural and agricultural environments.

Global Water Systems II (Engineered Water Cycle)

Provides a comprehensive appreciation of how the natural water cycle is influenced by human activities including how engineering activities control the flow and quality of water for urban, industrial, commercial and agricultural use and how stormwater and wastewater are tested and managed.

Water Resources and Society

Covers key water management issues, events and theories. Discusses the roles and relationships inherent in water and its usage with several different societies at various periods in their histories. Explores five major paradigms of water management and the increasing pressure on societies in the present day to achieve sustainable water management.

Water Resources Planning and Management

Raises issues associated with the planning and management of water resources taking into account sustainability, economic, environmental and social issues and provides techniques to assist in the national planning and management of these water resources.

COURSEWORK ELECTIVES

Students studying the Graduate Certificate full-time have the option of choosing 2 core courses and 2 coursework electives with the approval of the Programme Director.

Coursework electives are offered in a number of delivery modes in the following streams:

- Ecosystem and Catchment Management
- Management of Water Infrastructure
- Water Quality and Treatment
- Groundwater Hydrology / Hydrogeology
- Irrigation
- Water Planning
- Unstreamed Electives

GRADUATE CERTIFICATE EXIT ▶

CORE COURSE DELIVERY

Core courses are offered flexibly to meet the needs of students in the following delivery modes:

Semester (Internal)	Access Grid is a high-tech interactive internet conferencing teaching medium whereby all five partner universities join a virtual classroom, face to face in real time. Course materials and lecturer and student interaction are supported via a secure student portal.
Intensive (Internal and External)	Intensive delivery comprises 3-5 days of teaching plus assessment, and meets the needs of working professionals.
Distance/Online (External)	Delivery allows full flexibility for the student to study any time, anywhere. Course materials and lecturer and student interaction are supported via a secure student portal.

UNIVERSITY CODES

A	The University of Adelaide	F	Flinders University	D	Deakin University
S	University of South Australia	CQU	CQUniversity	CSU	Charles Sturt University**

**Charles Sturt University is a teaching institution, but it is not an ICE WaRM partner university.

For further information, or to download a schedule listing all courses, streams, delivery modes and semester offerings, visit: www.icewarm.com.au > Programmes > Education > Graduate Certificate in WRM



International Centre of Excellence in Water Resources Management

Who We Are

ICE WaRM is an Australian Government initiative being implemented by a national consortium of shareholders, supporters and associates. Partnership is a key feature of the Centre, which recognises that the pursuit of excellence in the increasingly important water resources management sector must be a collaborative task.

ICE WaRM shareholders, supporters and associates include Australia's leading education, training and research centres.

Founding Shareholders

- Deakin University
- Flinders University
- The University of Adelaide
- Central Queensland University
- University of South Australia
- National Centre for Groundwater Research and Training
- AITEC Corporate Education and Consulting

South Australian Government Supporters

- Department of Further Education, Employment, Science and Technology (DFEEST)
- TAFE South Australia
- Department of Water, Land and Biodiversity Conservation (DWLBC)
- SA Research and Development Institute (SARDI)
- SA Water Corporation, including the Australian Water Quality Centre

Other Supporters and Associates including

- Water-related research organisations, CSIRO and Cooperative Research Centres (CRCs)
- Charles Sturt University
- Water Industry Alliance
- United Water & international parent Veolia

ICE WaRM is continually growing its list of partners, supporters and associates, both in Australia and internationally. To be involved, contact us.

FURTHER INFORMATION

The International Centre of Excellence in Water Resources Management (ICE WaRM)

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CRICOS Provider Numbers for principal ICE WaRM partners:

The University of Adelaide - 00123M; University of South Australia - 00121B; Flinders University - 00114A; Deakin University - 00113B; Central Queensland University QLD - 00219C.

Information current as at January 2010.