

# WATR7300 - Water planning and economics (2 units)

## Integration module

### Course description

This course (WATR7300) Water planning and economics has twin aims. Firstly, it aims to introduce students to some of the goals, objectives and principles of water planning in the 21st century; and second, to water resource economics and economic concepts pertinent to water management and planning. It will explore principles of water planning and current issues, using Australia as a learning model with references to different social and economic contexts. Students will be introduced to economic and social impact analyses which are key aspects of water planning and management. There will be emphasis on foundational concepts and methodologies. Risk assessment including adaptation for climate change impact will be examined. As one of the outcomes of plans is security for consumptive water users, this will be discussed in the context of Australia and contrasted with developing countries. Environmental allocations are also discussed. Thus students are encouraged to develop awareness of the need to integrate economic, social, legal and environmental perspectives in planning against a background of uncertainty and change.

### Course introduction

This course provides an introduction to the inter-related areas of water resources planning and economics. It will introduce students to the goals, objectives and principles of water planning in the 21st century and the challenges of integrating social, economic and environmental perspectives in water planning. The course will provide a broad introduction to water resource economics and students will gain familiarity with economic concepts pertinent to water management and planning.

### Course delivery

- **Full-time** (on-campus) students, including international students, are required to enrol in the internal offering in Semester 2.
- **Part-time** (external) students are required to enrol in this module in Semester 4. The Semester 4 intensive six-day workshop is held at the beginning of the semester (new location, to be advised early 2012). The remainder of the course will be taught externally on-line.

### Assumed background

The following modules are pre-requisites for this course: WATR7000, WATR7001, WATR7002 and WATR7003.

### Learning objectives

After successfully completing this course, students should be able to:

- develop a sound understanding of the key principles and issues relating to water planning and economics in developing and developed country contexts;
- in relation to water planning, have a basic understanding of social and cultural values in water and how to identify these values, and incorporate them in social impact assessments;
- understand how economic principles can inform planning and allocation of water resources;
- be able to discuss the economic values of water, and the different methodologies used to identify these values;
- be able to apply principles of risk assessment in relation to water planning;
- have a basic understanding of water entitlements in developed and developing countries and the extent that they provide security for users and protect ecosystem health;
- be able to communicate the essential elements of water resource planning and economics in developed and developing countries in appropriate oral and written formats;
- be able to show how relevant theories and assessments presented in this course can inform the analysis of case studies and help to identify practical, integrated solutions to problems of water planning and management;
- participate successfully in an integrated group project exploring detailed aspects of integrated water management.



Students inspecting  
 Mt. Crosby Water  
 Treatment Plant



IWC Graduates receive a co-badged degree from four leading Australian universities, ranked amongst the top 1% of the best universities in the world for teaching and research. (QS Global Ranking)

### Kristal Burry – Australia

The exciting thing about integrated water management is the new breed of water managers it is creating, who can interact with professionals from a number of disciplines. That's a skill which is desperately needed to manage water effectively.



### Teaching staff

**Course Coordinator:** [Dr Steven Pratt](#) (The University of Queensland)

**Lead Lecturer:** [Assoc Prof Poh-Ling Tan](#) (Griffith University)

**Lecturer:** [Prof Andrew Dragun](#) (Griffith University)

### Problem-Based Learning (PBL) projects

Parallel PBL projects and field trips will run through the semester, comprising roughly 50% of the total contact time and assessment weight for the Integration semester. These enable students to develop skills that complement the content delivered in the four co-requisite courses: WATR7100, WATR7200, WATR7300, WATR7400. Please see other co-requisite course profiles to cross-reference.

The PBL stream for the Integration semester comprises an individual project and a group project conducted in multidisciplinary teams:

- **PBL3:** Development of an implementation plan for increasing water recycling in the lower Great Southern (Group project)
- **PBL4:** Critical assessment of Australian integrated water management learnings and application in a developing country context (Individual project)



### Field trips

Students begin the Integration semester with a two-week field trip to [The University of Western Australia's Centre of Excellence in Natural Resource Management in Albany](#), south Western Australia. The cost of the trip is covered in course fees.

For a complete list of field trips that students undertake during the Integration semester, please refer back to "Field trips" on page 4 of this syllabus or visit [IWC website](#).

Photos of students working on group projects.