

## Subject overview

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The subject covers the determination of the biological status and quality of river systems and coastal waters; studies on the effects of pollutants on aquatic ecosystems; monitoring strategies and standards of pollution control; integrated coastal management and aspects of fisheries exploitation and management.

## Learning Outcomes

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By the completion of this subject students will be able to:

- Appreciate the need for water resource management to manage the few uncontaminated sources of water available as well as prevent further contamination of those that are contaminated and understand tele-connections in relation to contamination of water bodies.
- Perceive that water is no longer for purely public usage but a commodity with social, biological and economic dimensions.
- Recognize their personal contribution to integrated water resource management and be able to suggest ways in which water management in homes and on board ship can be improved.
- Demonstrate an understanding of the various uses of water by different users and the consequent environmental impacts as well as how these impacts can be mitigated.

## Assessment overview

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- Attendance and Participation: 10%
- Tutorial Paper I (1,000 - 1,500 words): 15%
- Midterm Exam: 25%
- Tutorial Paper II (1,000 - 1,500 words): 15%
- Final Exam: 35%

## Subject modules

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- An introduction to water management
- Water cycles
- Land and the impacts of changes in its use
- Aquatic ecosystems and human impacts
- Aquatic ecosystem health
- Uses of water
- Sanitation and pollution
- Governance structures
- Organizational structures and management of water, and
- Application of integrated water resources management in the real world.

## Required readings

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- Cunningham, W. P., Cunningham, M.A., & Saigo, B.W. (2006). Environmental science: A global concern (9th Ed.). Columbus, OH: McGraw-Hill. ISBN-10: 0073218812; ISBN-13: 978-0073218816
- Human Development Report. (2006). Beyond scarcity: Power, poverty and the global water crisis. United Nations Development Programme (UNDP) Retrieved May 16, 2007 from <http://hdr.undp.org/hdr2006/>. ISBN-10: 0230500587; ISBN-13: 978-0230500587
- Newson, M. (1997). Land, water and development (2nd Ed.) London, UK: Routledge. ISBN-10: 041515507X; ISBN-13: 978-0415155076
- Students will also read a variety of journal articles assigned by Academic Teaching Staff.

## Questions?

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If you have any questions about any of the subject summaries, please contact us.