

# Integrated Water Catchment Management

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| <b>Year and Campus:</b>                    | 2013                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Coordinator:</b>                        | Dr Michael Stewardson (Engineering) Dr Philip Marren (MSLE)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Contact:</b>                            | <p><b>Office for Environmental Programs</b><br/>Ground Floor, Walter Boas Building (building 163)</p> <p><i>Enquiries</i><br/>Phone: 13 MELB (13 6352)<br/>Email: <a href="mailto:13MELB@unimelb.edu.au">13MELB@unimelb.edu.au</a> (<a href="mailto:13MELB@unimelb.edu.au">mailto:13MELB@unimelb.edu.au</a>)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Overview:</b>                           | <p>Integrated Water Catchment Management is offered as a major field of study in the Master of Environment degree.</p> <p>With global climate change and more extreme weather conditions, water catchments have never been under more pressure, and professionals with skills in their management are in high demand.</p> <p>Catchment management involves the integration of sound biophysical information with social and economic analysis. This is used to achieve the best outcomes for a catchment's natural resources and the people who live and work there.</p> <p>Students studying this major will look into the functioning of catchments and the constraints to improving catchment management; particularly, how these constraints can be eased.</p> <p>Integrated Water Catchment Management is appropriate for professionals working in soil and water regulation, land management, and conservation in the private and public sectors.</p> <p>The Office for Environmental Programs is looking for students with a first degree in physical science, life science, social science, engineering, forestry, horticulture or agriculture. Professional geologists, natural resource scientists and managers who wish to gain advanced knowledge of catchment management strategies in urban and rural environments would also benefit from studies in this field.</p> <p>Students can expect to find employment in regulatory agencies, local and state government authorities, environmental consulting companies, and industries concerned with land development, recreation and tourism.</p> |
| <b>Objectives:</b>                         | <p>Students who complete the Master of Environment will have:</p> <ul style="list-style-type: none"> <li>• An advanced understanding of environmental issues</li> <li>• Advanced skills and techniques applicable to changing and managing the environment</li> <li>• An ability to evaluate and synthesise research and professional literature in the chosen stream or focus of study</li> <li>• An advanced understanding of the international context and sensitivities of environmental assessment</li> </ul> <p>The graduate attributes for the Master of Environment are:</p> <ul style="list-style-type: none"> <li>• Expertise in multidisciplinary understanding, analysis and research with an environmental focus</li> <li>• Collaborative approaches to environmental problem solving</li> <li>• Capacity to engage in critical social and sustainability questions</li> </ul> <p>The Master of Environment generic skills are:</p> <ul style="list-style-type: none"> <li>• Multidisciplinary and trans-disciplinary knowledge and research of environmental relevance</li> <li>• Collaborative environmental management skills</li> <li>• Capacity for independent learning across discipline boundaries</li> </ul>                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Structure &amp; Available Subjects:</b> | <p>Students will be required to complete the two core subjects, plus choose three subjects from the compulsory subject list and undertake electives to make up the balance of the award. The selection of electives is made in consultation with the Integrated Water Catchment Management major coordinator.</p> <p>For a current list of subjects offered in the Integrated Water Catchment Management major, please refer to the course information page at: <a href="http://www.environment.unimelb.edu.au/futurestudents/specialist_paths_of_study/integrated_catchment_management">http://www.environment.unimelb.edu.au/futurestudents/specialist_paths_of_study/integrated_catchment_management</a></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

([http://www.oep.unimelb.edu.au/currentstudents/master\\_of\\_environment/specialist\\_paths\\_of\\_study/conservation\\_restoration\\_and\\_landscape\\_management](http://www.oep.unimelb.edu.au/currentstudents/master_of_environment/specialist_paths_of_study/conservation_restoration_and_landscape_management))

**Subject Options:****Core Subjects**

Students are required to complete the subjects:

| Subject                                           | Study Period Commencement: | Credit Points: |
|---------------------------------------------------|----------------------------|----------------|
| MULT90004 Sustainability Policy and Management    | Not offered 2013           | 12.50          |
| MULT90005 Interdisciplinarity and the Environment | Not offered 2013           | 12.50          |

**Compulsory Subjects**

and choose 3 subjects from the list of:

| Subject                                           | Study Period Commencement: | Credit Points: |
|---------------------------------------------------|----------------------------|----------------|
| AGRI90066 Soil Science and Management             | Not offered 2013           | 12.50          |
| CVEN90019 Sustainable Water Resources Systems     | Not offered 2013           | 12.50          |
| GEOL90005 Hydrogeology                            | Not offered 2013           | 12.50          |
| ENEN90028 Monitoring Environmental Impacts        | Not offered 2013           | 12.50          |
| GEOG90003 Integrated River & Catchment Management | Not offered 2013           | 12.50          |

**Elective Subjects**

plus undertake electives to make up the balance of the award. The recommended list of electives includes:

| Subject                                            | Study Period Commencement: | Credit Points: |
|----------------------------------------------------|----------------------------|----------------|
| DEVT90002 Internship in Development                | Not offered 2013           | 12.50          |
| ENST90002 Social Impact Assessment and Evaluation  | Not offered 2013           | 12.50          |
| EVSC90015 Environmental Impact Assessment          | Not offered 2013           | 12.50          |
| ENST90005 Environmental Policy                     | Not offered 2013           | 12.50          |
| NRMT90002 Management of Plant and Animal Invasions | Not offered 2013           | 12.50          |
| NRMT90003 Social Research Methods                  | Not offered 2013           | 12.50          |
| ECON90016 Environmental Economics and Strategy     | Semester 1                 | 12.50          |
| ENEN90031 Quantitative Environmental Modelling     | Not offered 2013           | 12.50          |
| GEOM90005 Remote Sensing                           | Not offered 2013           | 12.50          |
| GEOM90008 Foundations of Spatial Information       | Not offered 2013           | 12.50          |
| ENEN90032 Environmental Analysis Tools             | Not offered 2013           | 12.50          |
| EVSC90014 Environmental Risk Assessment            | Not offered 2013           | 12.50          |
| CHEM90007 Environmental Chemistry                  | Not offered 2013           | 12.50          |
| ATOC90002 Climate Affairs                          | Not offered 2013           | 12.50          |
| LAWS70068 Environmental Law                        | Not offered 2013           | 12.50          |
| 730816 Water Law                                   | Not offered 2013           | 12.50          |

|                                      |                                                                                             |                  |       |
|--------------------------------------|---------------------------------------------------------------------------------------------|------------------|-------|
|                                      | FRST90022 Forests and Water                                                                 | September        | 12.50 |
|                                      | EVSC90010 Environmental Risk Assessment                                                     | Not offered 2013 | 12.50 |
|                                      | ENST90006 Environmental Research Review                                                     | Not offered 2013 | 12.50 |
|                                      | ENST90007 Environmental Research Topic                                                      | Not offered 2013 | 25    |
|                                      | ENST90016 Environmental Research Project                                                    | Not offered 2013 | 50    |
|                                      | ENST70001 Environmental Research Proj (long) MYE                                            | Semester 2       | 25    |
|                                      | ENST90020 Environmental Research - Industry C                                               | Not offered 2013 | 50    |
|                                      | ENST70002 Environmental Research - Industry D                                               | Not offered 2013 | 25    |
|                                      | ENST90024 Environmental Research Topic (Long)                                               | Semester 2       | 12.50 |
|                                      | ENST90025 Environmental Research - Industry A                                               | Not offered 2013 | 25    |
|                                      | ENST90026 Environmental Research - Industry B                                               | Not offered 2013 | 12.50 |
| <b>Links to further information:</b> | <a href="http://www.environment.unimelb.edu.au/">http://www.environment.unimelb.edu.au/</a> |                  |       |
| <b>Notes:</b>                        | Other subjects may be approved at the discretion of the coordinator.                        |                  |       |
| <b>Related Course(s):</b>            | Master of Environment<br>Master of Environment                                              |                  |       |