

GEOG30022 Rivers: Hydrology and Ecology

Credit Points:	12.50
Level:	3 (Undergraduate)
Dates & Locations:	2011, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 24 hours of lectures, 6 3-hour practicals and up to 24 hours of fieldwork scheduled on weekends Total Time Commitment: 120 hours
Prerequisites:	Usually 37.5 points of second year subjects including at least one of GEOG20002 Geomorphology or ECOL20003 Ecology or equivalent as approved by the subject coordinator.
Corequisites:	N/A
Recommended Background Knowledge:	N/A
Non Allowed Subjects:	Credit cannot be obtained for both this subject and former Faculty of Arts subjects 121-349 Principles of Environmental Hydrology or 121-350 Techniques in Environmental Hydrology or 121-029 Environmental Hydrology B or 121-033 Environmental Hydrology.
Core Participation Requirements:	For the purposes of considering request for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005), and Students Experiencing Academic Disadvantage Policy, academic requirements for this subject are articulated in the Subject Description, Subject Objectives, Generic Skills and Assessment Requirements of this entry. The University is dedicated to provide support to those with special requirements. Further details on the disability support scheme can be found at the Disability Liaison Unit website: http://www.services.unimelb.edu.au/disability/
Coordinator:	Assoc Prof Chris Walsh
Contact:	Melbourne School of Land & Environment Student Centre Ground Floor, Land & Food Resources (building 142) <i>Enquiries</i> Phone: 13 MELB (13 6352) Email: 13MELB@unimelb.edu.au (mailto:13MELB@unimelb.edu.au)
Subject Overview:	This subject examines principles in the disciplines of hydrology, fluvial geomorphology and ecology, emphasising the use of these to understand environmental management problems in rivers. The subject examines water in terms of quantity and quality; the physical channel and floodplain systems in which it is conveyed and stored; and the population, community and ecosystem dynamics of the organisms that occupy these systems. Through practicals and fieldwork, students should develop an understanding of the relations between catchment characteristics and the associated biota. Students should become aware of the multidisciplinary nature of river management and the need for critical examination of ideas in the literature.
Objectives:	Students should be able to : <ul style="list-style-type: none"> # acquire, analyse and present data relating to channel characteristics, water quality and quantity, and the biota of streams; # understand the principles of flow in open channels and of fluvial geomorphology; # understand the processes that determine water quality, flow regime and the ecological status of rivers; # understand the principles of ecology as they relate to rivers; and # be able to apply basic laboratory, computer and field methods for stream hydrology and ecology.
Assessment:	<ul style="list-style-type: none"> • Practical exercises completed in practical classes (weeks 1-4) (20%); • A critical review of a set reading (1000 words, due early April) (20%); • A field research report of 2500 words (due

	late May) (35%),• A group presentation on field research (5%); and• A 1-hour exam (during the examination period) (20%).
Prescribed Texts:	Stream Hydrology: An Introduction for Ecologists, N.D. Gordon, T.A. McMahon, B.L. Finlayson, C.J. Gippel and R.J. Nathan, John Wiley & Sons, 2nd edition, 2004
Breadth Options:	This subject potentially can be taken as a breadth subject component for the following courses: # Bachelor of Music (https://handbook.unimelb.edu.au/view/2011/B-MUS) You should visit learn more about breadth subjects (http://breadth.unimelb.edu.au/breadth/info/index.html) and read the breadth requirements for your degree, and should discuss your choice with your student adviser, before deciding on your subjects.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	On completion of this subject students should have developed the following generic skills: # be able to evaluate and synthesise the research and professional literature in stream ecology and hydrology as they relate to environmental management; # be able to design, conduct and report on original research based on field and/or laboratory investigation; # work effectively in projects which require team-work; and # conduct sample surveys and carry out basic quantification of water quantity and quality
Notes:	Students enrolled in the BSc (both pre-2008 degree and new degrees), or a combined BSc course (except for the BA/BSc) may receive science credit on the completion of this subject.
Related Course(s):	Bachelor of Science
Related Majors/Minors/Specialisations:	Ecology (pre-2008 Bachelor of Science) Ecology and Evolutionary Biology Environmental Geographies, Politics and Cultures Environmental Science Environmental Science Environmental Studies Major Geography Geography Geography Major Science credit subjects* for pre-2008 BSc, BASc and combined degree science courses