GEOG30022 River Ecology & Ecosystem Management

Credit Points:	12.5
Level:	3 (Undergraduate)
Dates & Locations:	2016, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus. An enrolment quota of 40 students applies to this subject. For detailed information on the quota subject application process, enrolment deadlines and selection preferences, refer to the Faculty of Science website: http://science.unimelb.edu.au/students/course-planning-and-advice
Time Commitment:	Contact Hours: 24 hours of lectures, 10 3-hour practicals and up to 30 hours of fieldwork scheduled on weekends Total Time Commitment: Contact Hours: 24 hours of lectures, 10 3-hour practicals and up to 30 hours of fieldwork scheduled on weekends Total Time Commitment: 170 hours
Prerequisites:	At least one of the following, or equivalent as approved by the subject coordinator.

Subject	Study Period Commencement:	Credit Points:
ECOL20003 Ecology	Semester 2	12.50
GEOG20009 Landscapes and Diversity	Semester 2	12.50

Corequisites:	None
Recommended Background Knowledge:	37.5 points of second year subjects.
Non Allowed Subjects:	None
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:	Prof Barbara Downes
Contact:	**barbarad@unimelb.edu.au (mailto:barbarad@unimelb.edu.au)**
Subject Overview:	This subject examines theories in the discipline of ecology and biogeography as they pertain to riverine environments, emphasising the use of theory to understand how to solve environmental management problems in river ecosystems. The subject examines the population, community and ecosystem dynamics of rivers, and the geographical distributions and diversities of the organisms that inhabit these ecosystems. Through practicals and fieldwork, students should develop an understanding of the relations between catchment characteristics, the nature of the water body and its associated biota. Students should become aware of the multidisciplinary nature of ecosystem management and the need for critical examination of ideas in the literature.
Learning Outcomes:	Students should be able to: # understand the principles of ecology and biogeography as they relate to river ecosystems; and # acquire, analyse and present data relating to catchment characteristics, water quality and quantity, and the biota of river ecosystems; # understand some principles of flow in open channels;

	# understand the processes that determine water quality and quantity and the ecological status of rivers; # apply basic laboratory, computer and field methods for freshwater ecology.
Assessment:	• Practical exercises completed primarily within practical classes in weeks 2-11: 30% • A field research report of 2500 words due late May: 45% • A group presentation on field research in groups of 6-8 students at the end of semester: 5% • A 1-hour exam during the examination period: 20%
Prescribed Texts:	None
Recommended 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/2016/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):	Master of Science (Geography)
Related Majors/Minors/ Specialisations:	Ecology and Evolutionary Biology Environmental Geographies, Politics and Cultures major Environmental Geography Environmental Science Environmental Science major Environments Discipline subjects Geography Integrated Geography Integrated Geography Integrated Geography Integrated Geography Physical Geography Physical Geography Physical Geography Physical Geography Science-credited subjects - new generation B-SCI and B-ENG. Selective subjects for B-BMED