

ERTH90027 Fluvial Geomorphology and Hydrology

Credit Points:	12.5						
Level:	9 (Graduate/Postgraduate)						
Dates & Locations:	This subject is not offered in 2016.						
Time Commitment:	Contact Hours: 12 x 2-hour lectures, 6 x 3-hour practicals, 2 x 1-day field trips, 1 x 3-day field trip Total Time Commitment: 170 hours						
Prerequisites:	Admission to the postgraduate diploma or masters programs in Environmental Studies/ Geography.						
Corequisites:	None						
Recommended Background Knowledge:	Some familiarity with mathematical software such as Excel.						
Non Allowed Subjects:	Students who have completed the following subject, or equivalent, are ineligible: <table border="1" data-bbox="389 741 1485 891"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>GEOG30004 Fluvial Geomorphology</td> <td>Semester 2</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	GEOG30004 Fluvial Geomorphology	Semester 2	12.50
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GEOG30004 Fluvial Geomorphology	Semester 2	12.50					
Core Participation Requirements:	It is University policy to take all reasonable steps to minimise the impact of disability upon academic study, and reasonable adjustments will be made to enhance a student's participation in the University's programs. This course requires all students to enrol in subjects where they must actively and safely contribute to field excursions and laboratory activities. Students who feel their disability will impact on meeting this requirement are encouraged to discuss this matter with the Subject Coordinator and Disability Liaison http://services.unimelb.edu.au/disability/ students email: disability-liaison@unimelb.edu.au						
Contact:	pmarren@unimelb.edu.au (mailto:pmarren@unimelb.edu.au)						
Subject Overview:	The management of river systems for environmental purposes is underpinned by the science that determines their geomorphological and hydrological functioning. This subject provides a background in the science of river and catchments by focusing on: (1) the hydrology of river catchments and channels and the factors that control the volume and timing of flows in rivers; (2) the morphology of river channels, how this is determined by the water and sediment delivered from the catchment; (3) the role of hydrology and geomorphology in controlling the functioning of rivers as physical systems and ecosystems; (4) river channel changes in response to climate and anthropogenic factors and how these can be understood and managed. This knowledge will provide an essential understanding for students interested in river and catchment management. The subject has a strong emphasis on fieldwork and practical classes, in order to provide real-world examples and essential skills.						
Learning Outcomes:	At the end of the course, students will be expected to have developed an understanding of the physical processes that underpin the management river of rivers. Students will have developed the following: <ul style="list-style-type: none"> # An understanding of catchment and channel hydrology; # An understanding of the physical functioning of rivers; # An understanding of the response of rivers to climate change and land use changes; and # A scientific basis for going on to undertake river and catchment management activities. 						
Assessment:	Field trip reports (2 x 1250 words), mid-semester: 2 x 25%; Literature report (500 words), late-semester: 10%; Major report (2000 words), end of semester: 40%						

Prescribed Texts:	Fluvial Forms and Processes: A New Perspective (D Knighton & G Wharton), Routledge 2014 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 is not available as a breadth subject.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	Upon successful completion of this subject, students will have acquired the following skills: <ul style="list-style-type: none"> # Be able to design, conduct and report on original research based on field and/or laboratory investigation; # Analyse and manipulate quantitative data, including the use of Excel spread sheets; # Work effectively in projects which require team-work; # Undertake a range of fieldwork, computer and laboratory tasks relevant to environmental management; and # Articulate their knowledge and understanding in written presentations including journal articles.
Related Course(s):	Master of Science (Geography)
Related Majors/Minors/Specialisations:	Integrated Water Catchment Management Integrated Water Catchment Management Master of Science (Ecosystem Science) - Discipline Elective subjects