COMP90059 Introduction to Python

Credit Points:	6.25
Level:	9 (Graduate/Postgraduate)
Dates & Locations:	2016, Parkville This subject commences in the following study period/s: February, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 40 hours of practicals and demonstrations Total Time Commitment: 85 hours
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	None
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 Student Support and Engagement Policy, academic requirements for this subject are articulated in the Subject Overview, Learning Outcomes, Assessment and Generic Skills sections of this entry. 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. Students who feel their disability may impact on meeting the requirements of this subject are encouraged to discuss this matter with a Faculty Student Adviser and Student Equity and Disability Support: http://services.unimelb.edu.au/disability
Coordinator:	Assoc Prof Kevin Walsh
Contact:	kevin.walsh@unimelb.edu.au
Subject Overview:	This course will provide an introduction to simple procedural programming in python with applications to Earth Sciences. We will teach you how to import data into python, manipulate and transform it in simple ways, plotting (including maps) and export. We will learn how to use the many publicly available extensions and modules to python, and particularly those which allow efficient computation and scientific analysis. We will learn how to solve very simple differential equations using python itself and discuss how to build real-world applications using freely available tools.
Learning Outcomes:	# This subject aims to equip students with discipline-specific knowledge and expertise appropriate for post-graduate research in the field; # equip students with discipline-specific knowledge and expertise enabling them to take their place as professional geologists in industry or government organisations; # an ability to identify the kind of digital information and software most appropriate to solving geophysical problems; # confidence and competence to interrogate geological problems employing modern digital techniques including a modern programming language.
Assessment:	Programming practicals, due one week after the end of the teaching period (45%) 2 x programming assignments, due one week after the end of the teaching period (55%)
Prescribed Texts:	Reading list will be circulated at the start of the pre-teaching period.
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:	# Handle large datasets in digital format;

	# exercise critical judgement; undertake rigorous and independent thinking; # adopt a problem-solving approach to new and unfamiliar tasks; # develop high-level written report and/or oral presentation skills; # interrogate, synthesise and interpret the published literature; # work as part of a team.
Related Course(s):	Master of Geoscience Master of Science (Earth Sciences)
Related Majors/Minors/ Specialisations:	Earth Sciences Honours Program - Earth Sciences