COMP30018 Knowledge Technologies

Credit Points:	12.50
Level:	3 (Undergraduate)
Dates & Locations:	2010, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 24 one-hour lectures (two per week) and 12 one-hour workshops (one per week) Total Time Commitment: 120 hours
Prerequisites:	The prerequisites are: 433-298 Algorithms and Data Structures OR 433-521 Algorithms and Complexity OR 433-253 Algorithms and Data Structures
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	433-352 Data on the Web and 433 687 KnowledgeTechnologies
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/
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Subject Overview:	Much of the world's knowledge is stored in the form of unstructured data (e.g. text) or implicitly in structured data (e.g. databases). In this subject students will learn algorithms and data structures for extracting, retrieving and storing explicit knowledge from various data sources, with a focus on the web. Topics include: data encoding and markup, web crawling, clustering, regular expressions, pattern mining, Bayesian learning, instance-based learning, document indexing, database storage and indexing, and text retrieval.
Objectives:	On successful completion of the subject, students should be able to: # Describe and apply the fundamentals of knowledge systems, including data acquisition and aggregation, knowledge extraction, text retrieval, machine learning and data mining.
Assessment:	Project work during semester, expected to take about 36 hours (30%); a mid-semester test (10%); and a 2-hour end-of-semester written examination (60%). To pass the subject, students must obtain at least 50% overall, 15/30 in project work, and 35/70 in the mid-semester test and end-of-semester written examination combined.

Prescribed Texts:	TBA
Breadth Options:	This subject potentially can be taken as a breadth subject component for the following courses: # **Bachelor of Arts (https://handbook.unimelb.edu.au/view/2010/B-ARTS)** # **Bachelor of Commerce (https://handbook.unimelb.edu.au/view/2010/B-COM)** # **Bachelor of Environments (https://handbook.unimelb.edu.au/view/2010/B-ENVS)** # **Bachelor of Music (https://handbook.unimelb.edu.au/view/2010/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: # Ability to undertake problem identification, formulation, and solution # Ability to utilise a systems approach to complex problems and to design and operational performance well as an effective team member # Ability to manage information and documentation # Capacity for creativity and innovation
Related Course(s):	Bachelor of Engineering (Software Engineering) Bachelor of Science
Related Majors/Minors/ Specialisations:	Computer Science Computer Science Master of Engineering (Software) Software Systems