

# COMP90056 Stream Computing and Applications

<b>Credit Points:</b>	12.50						
<b>Level:</b>	9 (Graduate/Postgraduate)						
<b>Dates &amp; Locations:</b>	This subject is not offered in 2013.						
<b>Time Commitment:</b>	Contact Hours: 36 hours(1 two-hour lecture per week and 1 one-hour tutorial/lab per week) Total Time Commitment: 120 hours						
<b>Prerequisites:</b>	<table border="1"> <thead> <tr> <th>Subject</th> <th>Study Period Commencement:</th> <th>Credit Points:</th> </tr> </thead> <tbody> <tr> <td>COMP90015 Distributed Systems</td> <td>Not offered 2013</td> <td>12.50</td> </tr> </tbody> </table>	Subject	Study Period Commencement:	Credit Points:	COMP90015 Distributed Systems	Not offered 2013	12.50
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COMP90015 Distributed Systems	Not offered 2013	12.50					
<b>Corequisites:</b>	None						
<b>Recommended Background Knowledge:</b>	Java programming language, design of algorithms, distributed systems						
<b>Non Allowed Subjects:</b>	None						
<b>Core Participation Requirements:</b>	<p>&lt;p&gt;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.&lt;/p&gt; &lt;p&gt;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: &lt;a href="http://services.unimelb.edu.au/disability"&gt;http://services.unimelb.edu.au/disability&lt;/a&gt;&lt;/p&gt;</p>						
<b>Contact:</b>	Email: <a href="mailto:lkulik@unimelb.edu.au">lkulik@unimelb.edu.au</a> ( <a href="mailto:lkulik@unimelb.edu.au">mailto:lkulik@unimelb.edu.au</a> )						
<b>Subject Overview:</b>	<p>With exponential growth in data generated from sensor data streams, search engines, spam filters, medical services, online analysis of financial data streams, and so forth, there is demand for fast monitoring and storage of huge amounts of data in real-time. Traditional technologies were not aimed to such fast streams of data. Usually they required data to be stored and indexed before it could be processed.</p> <p>Stream computing was created to tackle those problems that require processing and classification of continuous, high volume of data streams. It is highly used on applications such as Twitter, Facebook, High Frequency Trading and so forth.</p> <p>The Stream computing course will interest students who want to learn more about real-time processing and its applications. It will be taught both from theoretical and practical points of view. The course will cover underlying fundamentals of stream processing systems, particularly architectural issues and algorithms for stream processing, mining and analysis. It will also include tutorials on how to develop and deploy applications into platforms such as IBM InfoSphere Streams®.</p>						
<b>Objectives:</b>	<p>Having completed this unit the student is expected to:</p> <ol style="list-style-type: none"> <li>1 Differentiate between stream computing models and conventional computing models.</li> <li>2 Understand stream computing algorithms and how to apply them in real world problems.</li> <li>3 Customise and create stream algorithms based on application requirements.</li> <li>4 Design, develop and deploy stream computing based applications.</li> </ol>						
<b>Assessment:</b>	2 Programming assignments, expected to take approximately 12 hours each, (20%) due in week 3 and 6 4 Class quizzes, Part of the tutorial/lab classes(10%), due in week 7,9,10 and 11 2 Hour Midterm Exam, (30%) , held in week 8 Final Project with 20 min presentation, expected to take approximately 50 hours, (40%), due in week 12 ILO1 and 2 are addressed in						

	all components of assessment. ILO3 and 4 are assessed in the Midterm Exam and the Final Project .
<b>Prescribed Texts:</b>	None
<b>Breadth Options:</b>	This subject is not available as a breadth subject.
<b>Fees Information:</b>	Subject EFTSL, Level, Discipline & Census Date, <a href="http://enrolment.unimelb.edu.au/fees">http://enrolment.unimelb.edu.au/fees</a>
<b>Generic Skills:</b>	On completion of this subject students should have the: <ul style="list-style-type: none"><li># Ability to undertake problem identification, formulation and solution</li><li># Capacity for independent critical thought, rational inquiry and self-directed learning</li><li># Profound respect for truth and intellectual integrity, and for the ethics of scholarship</li></ul>
<b>Related Course(s):</b>	Master of Information Technology Master of Information Technology Master of Information Technology