

## ENGR90019 Adv Topics in Fluid Mechanics

<b>Credit Points:</b>	12.50
<b>Level:</b>	9 (Graduate/Postgraduate)
<b>Dates &amp; Locations:</b>	2012, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.
<b>Time Commitment:</b>	Contact Hours: 24 hours of lectures Total Time Commitment: Estimated 120 hours
<b>Prerequisites:</b>	None
<b>Corequisites:</b>	Students must be enrolled in a PhD or Masters by Research
<b>Recommended Background Knowledge:</b>	Undergraduate course in fluid mechanics
<b>Non Allowed Subjects:</b>	None
<b>Core Participation Requirements:</b>	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: <a href="http://www.services.unimelb.edu.au/disability">http://www.services.unimelb.edu.au/disability</a>
<b>Contact:</b>	Melbourne School of Engineering Office Building 173, Grattan Street The University of Melbourne VIC 3010 Australia General telephone enquiries + 61 3 8344 6703 + 61 3 8344 6507 Facsimiles + 61 3 9349 2182 + 61 3 8344 7707 Email <a href="mailto:eng-info@unimelb.edu.au">eng-info@unimelb.edu.au</a> ( <a href="https://mce_host/faces/htdocs/eng-info@unimelb.edu.au">https://mce_host/faces/htdocs/eng-info@unimelb.edu.au</a> )
<b>Subject Overview:</b>	This subject will cover the relevant fundamentals of fluid mechanics and thermodynamics theory, and the way these fundamentals are used in current research practice and industry. The first part of the course will cover fundamentals and the mathematical tools related to fluid mechanics as a continuum. The second part of the course will involve examples from recent research in the archival literature, including theoretical and experimental studies.
<b>Objectives:</b>	The aim of this subject is to provide students with exposure to current research topics in the broad areas of thermodynamics and fluid dynamics.
<b>Assessment:</b>	Assessment for this subject includes: Two mid-semester assignments worth 20% each. One end of semester exam worth 60%. Students are required to pass the final exam in order to pass the subject.
<b>Prescribed Texts:</b>	None
<b>Recommended 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>	<p>On completion of this subject, students should have developed the following generic skills</p> <ul style="list-style-type: none"><li>• Ability to apply knowledge of basic science and engineering fundamentals</li><li>• Ability to communicate effectively, not only with engineers but also with the community at large</li><li>• In-depth technical competence in at least one engineering discipline</li><li>• Ability to undertake problem identification, formulation and solution;</li><li>• Ability to function effectively as an individual and in multi-disciplinary and multi-cultural teams, with the capacity to be leader or manager as well as an effective team member</li></ul>
<b>Related Course(s):</b>	Master of Philosophy - Engineering