

## 436-443 Production Engineering

<b>Credit Points:</b>	12.500
<b>Level:</b>	Undergraduate
<b>Dates &amp; Locations:</b>	This subject is not offered in 2008.
<b>Time Commitment:</b>	Contact Hours: Unit 1: 24 lectures and 4 hours of laboratory work; unit 2: 12 lectures and 8 hours of tutorial and laboratory work Total Time Commitment: Not available
<b>Prerequisites:</b>	436-384 Engineering Design and Processes 1 (or 436-203 Manufacturing Studies 1 or 436-362 Design/Processes) and 620-370 Statistics for Mechanical Engineers or equivalent
<b>Corequisites:</b>	None
<b>Recommended Background Knowledge:</b>	None
<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>Coordinator:</b>	Dr Alan Smith
<b>Subject Overview:</b>	<p>Subject consists of two units. The first is principally concerned with analysis of material removal processes in a consistent and predictive manner, and machine tools, the second with dimensional measurement science and its application to the solution of mechanical and manufacturing engineering measurement problems. Topics covered may include for unit 1: principles, performance characteristics and process selection of manufacturing processes; overview of casting, moulding and other forming, bulk deformation processes, material removal, finishing and fabrication; chip formation and mechanics of cutting; turning operations, single point lathe tools; prediction of force, torque power, chip flow and surface finish in turning; tool life characteristics and determination; optimisation analyses for turning; application of the Unified General Mechanics of Machining Approach to drilling, milling or form tools; abrasive processes; specification and inspection of machine tools. Unit 2: length, angle and form tolerances; standards; statistical estimation of measurement error; gauging and measurement systems design; lasers, interferometry and collimation; measurement of surface finish; computer controlled co-ordinate measuring machines.</p>
<b>Assessment:</b>	One 3-hour examination at the end of semester (70%), 4 laboratory reports and/or assignments not exceeding 2000 words each excluding appendices, computations, diagrams, tables and computer output due throughout the semester (30%). All components of assessment must be satisfactorily completed to pass the subject.
<b>Prescribed Texts:</b>	None
<b>Recommended Texts:</b>	Information Not Available
<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>	Information Not Available

**Related Course(s):**

Bachelor of Engineering (Mechanical & Manufacturing)/Bachelor of Commerce  
Bachelor of Engineering (Mechanical and Manufacturing Engineering)  
Bachelor of Engineering (Mechatronics) and Bachelor of Computer Science