

## 600-606 Advanced Molecular Biology Techniques

<b>Credit Points:</b>	12.50
<b>Level:</b>	9 (Graduate/Postgraduate)
<b>Time Commitment:</b>	Contact Hours: 30 hours comprising one 2 hour lecture per week and two 3 hour practical classes per semester. Total Time Commitment: Not available
<b>Prerequisites:</b>	None
<b>Corequisites:</b>	None
<b>Recommended Background Knowledge:</b>	This subject assumes a basic understanding of gene and protein function and molecular biology techniques.
<b>Non Allowed Subjects:</b>	None
<b>Core Participation Requirements:</b>	It is University policy to take all reasonable steps to minimise the impact of disability upon academic study and reasonable steps will be made to enhance a student's participation in the University's programs. This subject requires all students to actively and safely participate in laboratory activities. Students who feel their disability may impact upon their participation are encouraged to discuss this with the subject coordinator and the Disability Liaison Unit.
<b>Subject Overview:</b>	This subject is focussed on the use of molecular techniques to study gene and protein functions in a range of organisms. It aims to provide students with an advanced understanding of the strategies and techniques used in molecular biology of relevance both to the biotechnology industry and to advanced molecular biology research. Topics will be drawn from the current literature and ongoing research in molecular biology.
<b>Objectives:</b>	<p>Upon completion of this subject students should have:</p> <ul style="list-style-type: none"> <li>* a detailed understanding of advanced tools, resources and techniques in molecular biology;</li> <li>* an understanding of how these techniques are used to study gene and protein functions in cells and organisms;</li> <li>* an appreciation of how these techniques may be applied both in biotechnology and in advanced research;</li> <li>* an appreciation of the information resources available to assess the usefulness of a particular technique; and</li> <li>* acquired the knowledge to enable them to critically appraise new data arising from the use of these techniques and to interpret the implications of such data.</li> </ul>
<b>Assessment:</b>	Two 600-word reports due during mid and late semester, respectively (10% each); two 1000-word reports due during mid and late semester, respectively (25%) each; one oral presentation during semester (non-assessed hurdle requirement); a two-hour end-of-semester examination (30%).
<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>	<p>Completion of this subject is expected to enhance the generic skills of a student in:</p> <ul style="list-style-type: none"> <li>* the ability to understand how useful experimental tools are built upon an understanding of basic principles of molecular and cellular biology;</li> <li>* the ability to understand how complex new scientific data is acquired how it is appropriately interpreted;</li> <li>* understanding the connections between research and the biotechnology industry;</li> <li>* the ability to read and interpret complex literature in order to answer detailed questions on both theory and methodology</li> </ul>

	<ul style="list-style-type: none"><li>* an appreciation for how modern science is informed by cross-disciplinary studies leading to technological advances</li><li>* the ability to use information technology to acquire relevant knowledge for their understanding of the current status of the field and its relevance to society.</li></ul>
<b>Notes:</b>	This subject assumes a basic understanding of gene and protein function and molecular biology techniques.
<b>Related Majors/Minors/ Specialisations:</b>	R05 PB Master of Science (Biotechnology) R05 RG Master of Sciences - Genetics