# Biotechnology

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| **Year and Campus:** | 2009 |
| **Overview:** | Major study in **Biotechnology**.<br>Students may only complete this major in conjunction with another life sciences major selected from anatomy, biochemistry and molecular biology, botany, cell biology, chemistry, genetics, immunology, microbiology, neuroscience, pathology, pharmacology, physiology, reproduction and development or zoology.<br>Completion of *Biotechnology in Practice* plus 37.5 points of study at third year level in biotechnology.<br>At least 25 points of the 37.5 points at third year level in the biotechnology major must be taken from a department different from that responsible for teaching the student's other major.<br>At least 25 points of the combined 87.5 points at third year level for the biotechnology major and the student's other major must be practical laboratory subjects. |
| **Objectives:** | Biotechnology is the use of biological knowledge to develop new processes and products for use in industry, health, agribusiness and other areas of human technology. |
| **Subject Options:** | **Biotechnology major**<br>Completion of 50 points of study (12.5 points at second year and 37.5 points at third year level).<br>Core second year level subject: |

| Subject | Study Period Commencement: | Credit Points: |
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| 600-205 Biotechnology in Practice | Not offered 2009 | 12.50 |
| 202-211 Biotechnology | Semester 2 | 12.50 |

Plus three third year level subjects selected from the following biotechnology subjects:

| Subject | Study Period Commencement: | Credit Points: |
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| 521-301 Protein Structure and Function | Semester 2 | 12.50 |
| 521-302 Functional Genomics and Bioinformatics | Semester 1 | 12.50 |
| 521-303 Molecular Aspects of Cell Biology | Semester 1 | 12.50 |
| 606-306 Plant Molecular Biology & Biotechnology | Semester 2 | 12.50 |
| 606-309 Frontiers of Cell Biology | Semester 1 | 12.50 |
| 610-332 Bio-organic Chemistry | Semester 1 | 12.50 |
| 610-333 Molecular Technology | Semester 2 | 12.50 |
| 652-301 Evolutionary Genetics and Genomics | Semester 1 | 12.50 |
| 652-302 Genes: Organisation and Function | Semester 1 | 12.50 |
| 652-303 Developmental and Cellular Genetics | Semester 2 | 12.50 |
| 652-305 Human and Medical Genetics | Semester 2 | 12.50 |
| 526-301 Microbial Cells and Genomes | Semester 2 | 12.50 |
| 526-304 Principles of Immunology | Semester 1 | 12.50 |
| 531-303 Molecular/Genetic Basis of Disease-Lect | Semester 2 | 12.50 |

And the following **practical laboratory** biotechnology subjects:

| Subject | Study Period Commencement: | Credit Points: |
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| | 521-323 Advanced Techniques in Molecular Science | Semester 1, Semester 2 | 12.50 |
| | 610-399 Chemical Research Project | Summer, Semester 2 | 12.50 |
| | 652-304 Genetic Analysis | Semester 2 | 12.50 |
| | 526-321 Molecular Microbiology Techniques | Semester 1 | 12.50 |
| | 526-324 Immunological Techniques | Semester 1 | 12.50 |
| | 526-326 Projects: Immunology | Semester 2 | 12.50 |
| | 526-327 Projects: Microbiology | Semester 2 | 12.50 |
| | 534-306 Drug Discovery | Semester 2 | 12.50 |
| | 516-302 Developmental Biology | Semester 2 | 12.50 |
| | 654-304 Reproduction | Semester 2 | 12.50 |

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| **Notes:** | To be awarded two science majors (i.e. the biotechnology major and a second life sciences major), students must complete a minimum of 87.5 points of science study at third year level. |
| **Related Course(s):** | Bachelor of Arts and Bachelor of Science<br>Bachelor of Arts and Sciences<br>Bachelor of Commerce and Bachelor of Science<br>Bachelor of Science<br>Bachelor of Science and Bachelor of Information Systems |