Biotechnology

Year and Campus:	2016
Coordinator:	Associate Professor Ed Newbigin
Contact:	Email: **edwardjn@unimelb.edu.au (mailto:edwardjn@unimelb.edu.au)**
Overview:	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. Biotechnology advances can be based on knowledge from biological sciences, chemical sciences, physical sciences or engineering. Because of this, the major is not tied to a particular discipline area. The binding concept is that of developing technology from basic discipline knowledge in at least one area. For example, agricultural biotechnology will normally involve some core crop and food technology, molecular biotechnology will normally involve some core molecular biology and chemical biotechnology will normally involve some core chemistry together with some biological science. The Biotechnology major has a number of streams and integrates knowledge from a variety of scientific disciplines. Students will complete a sequence of specialist subjects in a discipline area and by the end of the major should have developed a detailed knowledge of that area and an appreciation of its biotechnological applications. The major provides students with opportunities to gain practical experience in the laboratory and to develop skills in problem-solving and the analysis, interpretation and communication of scientific data that will prepare them for the workplace.
Learning Outcomes:	*Biotechnology Major Graduates should demonstrate:* # understanding of the steps involved in taking science from the research laboratory to local and global marketplaces; # knowledge of the regulatory framework and financial context in which innovation-driven science companies operate to address a range of issues facing humankind; # communication and analytical skills in areas relevant to research-based and commercially focussed science; # awareness of the ethical considerations of science operating in a research-based and business context; # knowledge, skills and capacities developed within the particular biotechnology specialisation they have undertaken.
Structure & Available Subjects:	Completion of 50 points of study at Level 3.
Majors/Minors/ Specialisations	There are four specialisations within the Biotechnology major. The specialisations in Molecular Biotechnology, Biomedical Biotechnology and Agri-food Biotechnology are available within the Bachelor of Biomedicine course.

Major/Minor/Specialisation
Agri-food Biotechnology
Molecular Biotechnology
Biomedical Biotechnology
Chemical Biotechnology

Related Course(s):	Bachelor of Biomedicine Bachelor of Science