BIOL10004 Biology of Cells and Organisms

Credit Points:	12.50
Level:	1 (Undergraduate)
Dates & Locations:	2011, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
Time Commitment:	Contact Hours: 3 x one hour lectures per week, 30 hours of practical activities during the semester, pre-laboratory activities and computer workshops (independent learning tasks), averaging 3 hours per week and 10 one-hour tutorial/workshop sessions during the semester. Total Time Commitment: Estimated total time commitment of 120 hours
Prerequisites:	None
Corequisites:	None
Recommended Background Knowledge:	None
Non Allowed Subjects:	Credit cannot be gained for this subject and any of # 650-131 Biomed: Molecules, Cells & Organisms (prior to 2008)

Subject	Study Period Commencement:	Credit Points:
BIOL10002 Biomolecules and Cells	Semester 1	12.50

Core Participation Requirements:	For the purposes of considering applications for Reasonable Adjustments under the Disability Standards for Education (Cwth 2005) and Students Experiencing Academic Disadvantage Policy, 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. http://www.services.unimelb.edu.au/disability/
Coordinator:	Assoc Prof Dawn Gleeson
Contact:	Biology Laboratory Level 5 Redmond Barry Building **Tel:** (03) 8344 4881 **Fax:** (03) 9347 0604 **Email: biology-info@unimelb.edu.au (mailto:biology-info@unimelb.edu.au)** **Director of First Year Studies in Biology** Dr Mary Familari Email: **m.familari@unimelb.edu.au (mailto: m.familari@unimelb.edu.au)**
Subject Overview:	This objective of this subject is to familiarise students with modern concepts of cell and organismal biology, including structure and function of multicellular organisms including cell function, systems involved in energy transformations, nutrition, water uptake, excretion, gas exchange, circulation, and immune responses; plant and animal reproduction and development; mechanisms involved in responsiveness and coordination: hormonal control in plants and animals, and nervous systems in animals; and animal movement and behaviour.
Objectives:	At the completion of this subject, students should: # have a knowledge of the basic processes of life; # be familiar with the structure and function of both prokaryotic and eukaryotic cells; # understand the structure and function of organisms, and how these features contribute to the overall functioning of organisms;

	# understand the mechanisms of plant and animal reproduction and development; # be able to complete basic manipulations with laboratory equipment, in particular the use of microscopes; and # develop skills in recording observations, analysis and interpretation of data, and dissection techniques.
Assessment:	A 40 minute, on-line multiple choice test held mid-semester (10%); work in practical classes during the semester, made up of written work not exceeding 1500 words, assessment of practical skills within the practical class, and no more than 4 short multiple choice tests (25%), completion of between 4 and 6 independent learning tasks throughout the semester (5%); a 3-hour written examination on theory and practical work in the examination period (60%). A pass in the practical work is necessary to pass the subject.
Prescribed Texts:	R B Knox, P Y Ladiges, B K Evans and R Saint, Biology, An Australian Focus 4th Ed, McGraw-Hill, 2009.
Breadth Options:	This subject potentially can be taken as a breadth subject component for the following courses: # **Bachelor of Arts (https://handbook.unimelb.edu.au/view/2011/B-ARTS)** # **Bachelor of Commerce (https://handbook.unimelb.edu.au/view/2011/B-COM)** # **Bachelor of Environments (https://handbook.unimelb.edu.au/view/2011/B-ENVS)** # **Bachelor of Music (https://handbook.unimelb.edu.au/view/2011/B-MUS)** You should visit **learn more about breadth subjects (http://breadth.unimelb.edu.au/breadth/info/index.html)** and read the breadth requirements for your degree, and should discuss your choice with your student adviser, before deciding on your subjects.
Fees Information:	Subject EFTSL, Level, Discipline & Census Date, http://enrolment.unimelb.edu.au/fees
Generic Skills:	At the completion of this subject, students should: # have a knowledge of the basic processes of life; # be familiar with the structure and function of both prokaryotic and eukaryotic cells; # understand the structure and function of organisms, and how these features contribute to the overall functioning of organisms; # understand the mechanisms of plant and animal reproduction and development; # be able to complete basic manipulations with laboratory equipment, in particular the use of microscopes; and # develop skills in recording observations, analysis and interpretation of data, and dissection techniques.
Notes:	Students enrolled in the BSc (both pre-2008 and new degrees), BASc or a combined BSc course will receive science credit for the completion of this subject. Many second year subjects require the completion of this subject and BIOL10005 Genetics & the Evolution of Life Experiments involving the use of animals are an essential part of this subject; exemption from these experiments is not possible. This is a joint botany and zoology subject.
Related Course(s):	Bachelor of Agriculture Bachelor of Biomedicine Bachelor of Optometry Bachelor of Science
Related Majors/Minors/ Specialisations:	Biology and Botany Environmental Studies Major Master of Engineering (Biomedical)

	Science credit subjects* for pre-2008 BSc, BASc and combined degree science courses
Related Breadth Track(s):	Cell & Developmental Biology Genetics and Society Microbiology and immunology General Genetics Ecology, Evolution and Humanity Biotechnology Ecology Neuroscience