CEDB20003 Fundamentals of Cell Biology

Credit Points:	12.50
Level:	2 (Undergraduate)
Dates & Locations:	2011, Parkville This subject commences in the following study period/s: Semester 1, Parkville - Taught on campus.
Time Commitment:	Contact Hours: two x 1 hour lecture per week, 8 x 3 hour computer-aided learning (CAL) modules. Total Time Commitment: 48 contact hours with an estimated total time commitment of 120 hours.
Prerequisites:	The following two subjects are prerequisites:

Subject	Study Period Commencement:	Credit Points:
BIOL10004 Biology of Cells and Organisms	Semester 1	12.50
BIOL10005 Genetics & The Evolution of Life	Semester 2	12.50

Corequisites:	None
Recommended Background Knowledge:	It is highly recommended that students have undertaken a chemistry subject in first year. The minimum level of chemistry knowledge assumed for this subject is:

Subject	Study Period Commencement:	Credit Points:
CHEM10007 Fundamentals of Chemistry	Semester 1	12.50

Non Allowed Subjects:	The following subject is a non allowed subject:

Subject	Study Period Commencement:	Credit Points:
BIOM20001 Molecular and Cellular Biomedicine	Semester 1	25

Core Participation Requirements:	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: http://www.services.unimelb.edu.au/disability/
Coordinator:	Dr Robb De Iongh
Contact:	**r.deiongh@unimelb.edu.au (mailto:r.deiongh@unimelb.edu.au)** 8344 5788 Administrative Coordinator: Ms Kim Williams anatomy-student@unimelb.edu.au 8344 5791
Subject Overview:	The subject builds on the basic cell biology concepts introduced in first year biology and develops students' understanding of the processes that regulate the structure and function of eukaryotic cells. Using examples from plant and animal cells, the subject will outline the cellular structures and molecular processes that are fundamental for regulating cell function in multicellular organisms. It will also explore the external signals (physical, molecular, electrochemical) that can lead to changes in cell behaviour, gene expression, protein synthesis or cell replication.

Objectives:	In completing this subject, students should: # Develop a broad understanding of the structure of eukaryotic cells (plant and animal) and the compartments where various cellular activities occur. # Identify the range of cellular activities that are especially relevant to multicellular organisation. # Understand how external signals can lead to changes in gene expression and protein synthesis in cells. # Understand how electrical properties of cells are harnessed for electrochemical signalling.
Assessment:	Three 40 minute multiple choice tests (10% each) in early, mid and late semester; 2 hour final examination (70%) in end of semester exam period.
Prescribed Texts:	B Alberts, A Johnson, J Lewis, M Raff, K Roberts & P Walter, Molecular Biology of the Cell, 5th edition, Garland Science.
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:	On completion of this subject, students should have: # Developed analytical and problem-solving skills. # The capacity to integrate knowledge from disparate sources. # Developed collaborative learning skills in practical class groups. # Developed skills in observation and interpretation.
Notes:	This subject is not available to students enrolled in the Bachelor of Biomedicine. This subject is available for science credit to students enrolled in the BSc (both pre-2008 and new degrees), BASc or a combined BSc course. This subject is available to students enrolled in the New Generation BSc, pre-2008 BSc, pre-2008 BASc, pre-2008 BBiomedSc. Students undertaking this subject will be expected to regularly access an Internet-enabled computer. During semester there will be limited access to computer laboratories.
Related Course(s):	Bachelor of Biomedical Science Bachelor of Biomedicine Bachelor of Science
Related Majors/Minors/ Specialisations:	Science credit subjects* for pre-2008 BSc, BASc and combined degree science courses
Related Breadth Track(s):	Cell & Developmental Biology Neuroscience