BCMB20003 Biochemical Regulation of Cell Function

Credit Points:	12.5		
Level:	2 (Undergraduate)		
Dates & Locations:	2015, Parkville This subject commences in the following study period/s: Semester 2, Parkville - Taught on campus.		
Time Commitment:	Contact Hours: three x 1 hour lecture per week and one x 1 hour tutorial per week Total Time Commitment: 48 contact hours with an estimated total time commitment of 170 hours		
Prerequisites:	For BSc degree:		
	Subject	Study Period Commencement:	Credit Points:
	BCMB20002 Biochemistry and Molecular Biology	Semester 1, Semester 2	12.50
	This subject may also be taken as a corequisite (with the ap For BBiomed degree:	proval of the subject coo	ordinator).
	Subject	Study Period Commencement:	Credit Points:
	BIOM20001 Molecular and Cellular Biomedicine	Semester 1	25
	Other combinations of subjects that provide a similar backgr coordinator.	ound may be considered	d by the
Corequisites:		round may be considered	d by the
Corequisites: Recommended Background Knowledge:	coordinator.	round may be considered	d by the
Recommended	coordinator. Refer to prerequisite details. Level 1 Biology is strongly recommended.	Study Period Commencement:	Credit Points:
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Recommended Background Knowledge:	coordinator. Refer to prerequisite details. Level 1 Biology is strongly recommended. A biomedical or biological practical subject such as Subject BCMB20005 Techniques in Molecular Science or equivalent is strongly recommended. Students cannot enrol in and gain credit for this subject if presubject Biochemistry and Molecular Biology Part A or Biochemistry	Study Period Commencement: Semester 1, Semester 2 eviously obtained credit emistry and Molecular B e Adjustments under the and Engagement Policy overview, Learning Outco p>lt is University policy to yopon academic study, as participation in the Univ meeting the requirements of Student Adviser and St	Credit Points: 12.50 for pre-200 iology Part Disability , academic omes, o and versity's s of this udent
Recommended Background Knowledge: Non Allowed Subjects: Core Participation	coordinator. Refer to prerequisite details. Level 1 Biology is strongly recommended. A biomedical or biological practical subject such as Subject BCMB20005 Techniques in Molecular Science or equivalent is strongly recommended. Students cannot enrol in and gain credit for this subject if presubject Biochemistry and Molecular Biology Part A or Bioche B. For the purposes of considering request for Reasonable Standards for Education (Cwth 2005), and Student Support requirements for this subject are articulated in the Subject O Assessment and Generic Skills sections of this entry. Assessment and Generic Skills sections of this entry. programs. Students who feel their disability may impact on r subject are encouraged to discuss this matter with a Faculty Equity and Disability Support: http://services.unime	Study Period Commencement: Semester 1, Semester 2 eviously obtained credit emistry and Molecular B e Adjustments under the and Engagement Policy overview, Learning Outco p>lt is University policy to yopon academic study, as participation in the Univ meeting the requirements of Student Adviser and St	Credit Points: 12.50 for pre-2009 iology Part Disability , academic omes, o and versity's s of this udent

Dr Heather Verkade Destribut-verkade@unimelb.sdu.au (mailto:heather.verkade@unimelb.edu.au) Administrative Coordinator Mis Irene Koumanelis Licournanelis@unimelb.edu.au (mailto:i.kournanelis@unimelb.edu.au) Subject Overview: Subject investigates the molecular mechanisme by which cells regulate their replication, function and metabolism, i.e. the essential properties of living organisms. The focus of the subject is the examination of current or classic research that exemplifies these topics. Subject Coverview: By the end of the subject the regulation of protein holding and molecular cell biology. Topics include: the regulation of protein holding and molecular processes are fundamental to human existence. This subject is designed to complement and extend both BCMB20002 and BCMB20005. Learning Outcomes: By the end of the subject the student should understand:		
Administrative Coordinator Mrs Irene Koumanelis Lkoumanelis@unimelb.edu.au (malito:i.koumanelis@unimelb.edu.au) Subject Overview: Subject Overview: This subject investigates the molecular mechanisms by which cells regulate their replication, for metabolism, i.e. the essenth Isofogues of Uwing organisms. The focus of the subject is the examination of current or classic research that exemptifies these topics. Subject content focus os on modern research techniques in biochamistry and molecular cell biology. Topics include: the regulation of protein tolding and misloling, gene expression regulation, the transduction of cellular signals, cytosketelal remodelling and protein trafficking, and the regulation of cellular signals, cytosketelal remodelling and protein trafficking, and the regulation of cellular insubject is designed to complement and extend both BCME20002 and BCME20005. Learning Outcomes: By the end of the subject the student should understand: # the structures of cells, proteins, membranes, DNA and chromatin, and the importance of the estivators in regulation of the cell. # the structures of cells and coprotesion. # the importance of protein folding and the mechanisms by which this is controlled # the importance of protein folding and the recells and communicated by signal transduction molecules. # the importance of protein folding and the importance of the cytoskeleton in these processes within and external to cells and communicated by signal transduction molecules. Assessment: 3 hour exam held in the University examination period: 70%, 2 x intrasemester test during semester (10% esc		Dr Heather Verkade
Mrs Irene Koumanelis ikoumanelis@unimolb.edu.au. (mailto:i.koumanelis@unimolb.edu.au) Subject Overview: This subject investigates the molecular mechanisms by which cells regulate their replication, function and metabolism, i.e. the essential properties of living organisms. The focus of the subject is the examination of current or classic research that exemplituses these topics. Subject content focuses on modern research techniques in biochemistry and molecular cell biology. Topics include: the regulation of protein folding and mistolding, gene expression regulation, the transduction of protein folding and mistolding, gene expression regulation, the subject the student should understant BCMB20002 and BCMB20005. Learning Outcomes: By the end of the subject the student should understant: # the structures of cells, proteins, membranes, DNA and chromatin, and the importance of these structures in regulation of the cell. # the regulation of protein folding and the mechanisms by which this is controlled # the regulation of optotein folding and the mechanisms by which this is controlled # the regulation of optotein folding and the mechanisms by which this is controlled # the regulation of optotein folding and the mechanisms by which this is controlled # the transduction molecules. # how to interpret research data in these topic areas. Assessment: 3 hour exam held in the University examination period: 70%, 2 x intrasemester test during stream and the comest processes. # how the scientific literature represents the analysis of the above topics. # how the scientific literature represents the analysis of the above topics. # how to interpret research data in these topic areas. Assessment: 3 hour exam held in the University examination period: 70%, 2 x intrasemester test during semetre (10% eac		heather.verkade@unimelb.edu.au (mailto:heather.verkade@unimelb.edu.au)
Licouranelis@unimelb.edu.au (maitto:i.kouranelis@unimelb.edu.au) Subject Overview: This subject investigates the molecular mechanisms by which cells regulate their replication, function and metabolism, i.e. the essential properties of living organisms. The focus of the subject content focuses on moder nessearch techniques in biochemistry and molecular cell biology. Topics include: the regulation of protein folding and misolding, gene expression regulation, the transduction of cellular metabolism. These elegant biochemical processes are funcdamental to human existence. This subject is designed to complement and extend both BCME20002 and BCME20005. Learning Outcomes: By the end of the subject the student should understand:		Administrative Coordinator
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His subject potentially can be taken as a breach subject component for the following courses: # Bachelor of Arts (https://handbook.unimelb.edu.au/view/2015/B-ARTS) # Bachelor of Commerce (https://handbook.unimelb.edu.au/view/2015/B-COM) # Bachelor of Environments (https://handbook.unimelb.edu.au/view/2015/B-RVS) # Bachelor of Music (https://handbook.unimelb.edu.au/view/2015/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 the following generic skills: # have an in-depth understanding of the biochemical regulation of cell function # understand the principles of sound project and experimental design, including data analysis # be critical thinkers # apply analytical skills to prob	Prescribed Texts:	Nelson and Cox, Lehninger Principles of Biochemistry, 6th edn., 2013
# Bachelor of Environments (https://handbook.unimelb.edu.au/view/2015/B-ENVS) # Bachelor of Music (https://handbook.unimelb.edu.au/view/2015/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 the following generic skills: # have an in-depth understanding of the biochemical regulation of cell function # understand the principles of sound project and experimental design, including data analysis # be critical thinkers # apply analytical skills to problem solving Notes: This subject is available for science credit to students enrolled in the BSc (both pre-2008 and	Breadth Options:	# Bachelor of Arts (https://handbook.unimelb.edu.au/view/2015/B-ARTS)
# Bachelor of Music (https://handbook.unimelb.edu.au/view/2015/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 the following generic skills: # have an in-depth understanding of the biochemical regulation of cell function # understand the principles of sound project and experimental design, including data analysis # be critical thinkers # apply analytical skills to problem solving Notes: This subject is available for science credit to students enrolled in the BSc (both pre-2008 and		# Bachelor of Commerce (https://handbook.unimelb.edu.au/view/2015/B-COM)
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	Students undertaking this subject will be expected to regularly access an internet-enabled computer.
Related Majors/Minors/	Science-credited subjects - new generation B-SCI and B-ENG.
Specialisations:	Selective subjects for B-BMED