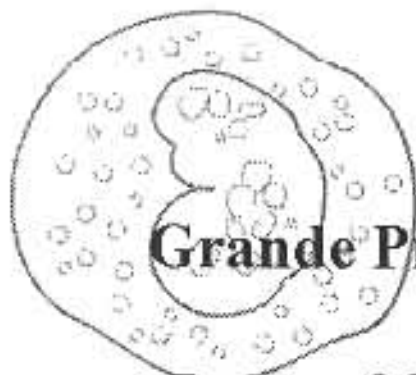
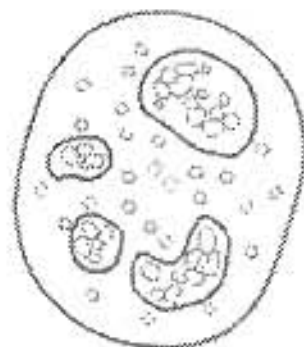
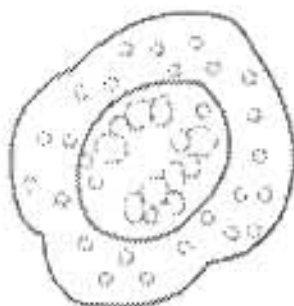


SEP 26 2000



**Grande Prairie Regional College**

**Dept. of Science & Technology**



**BI 2010  
Cellular Biology**

**Course Outline  
2000-2001**



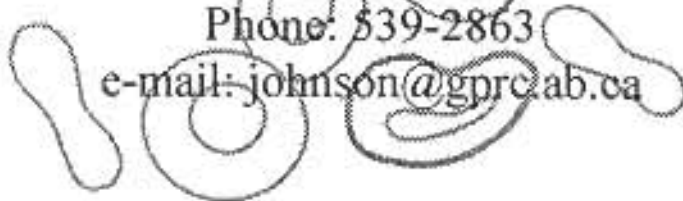
Instructor

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**Course Description** This course deals with the ultrastructure and metabolism of cells. It covers material on energy in biological systems; methods in cell biology, contractility; cell growth and replication, nuclear structure and cancer cell biology.

**Pre-requisites** BI 1070

**Pre-requisite/Co-requisite** CH 1610 or CH 1630

**Transferability:** University of Alberta - BIOL 201  
University of Calgary - BIOL 331  
University of Lethbridge - BIOL 2xxx

**Textbook** Essential Cell Biology (1998)  
Alberts, Bray, Johnson, Lewis, Raff, Roberts and Watson  
*Garland Publishing, Inc.*

This text is intended to supplement the lecture notes, not substitute for them.

Copies of "Molecular Biology of the Cell" by Alberts *et al* will be placed on reserve in the library as a source for some reading material.

<b>Evaluation:</b>	Quizzes	15%
	Mid-term Exam I	20%
	Mid-term Exam II	25%
	Final Exam	40%

There will be 5 or 6 quizzes given during class time, and they will be designed to test your knowledge of terminology.

**Web-site:** [http://www.gprc.ab.ca/courses\\_and\\_programs/biology/bi2010nf.html](http://www.gprc.ab.ca/courses_and_programs/biology/bi2010nf.html)

**Other Resources** Lecture summaries of BIOL 201 at the University of Alberta are available on the Internet at the address:  
  
<http://www.biology.ualberta.ca/courses.hp/bio201/bio201.htm>

This site also contains examples of past exams and suggested readings from "Molecular Biology of the Cell"

## Lecture Outline - BI 2010

TOPIC		READINGS	
		E.C.B.	M.B.O.T.C.
1	Introduction, Cell culture and cell fractionation		159-174
2	Microscopy: light and electron microscopy	1-8	
3	Methodology: light and electron microscopy		135-153
4	Labelling and detection methods		174-180
5	ATP and energy interconversions	77-106	
6	Membrane structure and membrane transport	347-369	
7	Specific examples of membrane transport	371-384	
8	Cell junctions: desmosomes, tight junctions, gap junctions	605-613	
9	Intracellular compartments: endoplasmic reticulum	13-15	433-450
10	Intracellular compartments: golgi, lysosomes, peroxisomes, vesicular transport		451-475 431-433
11	Protein sorting and targeting	452-462	
12	Endocytosis and exocytosis	462-477	
13	Genetic consequences of altered protein targeting		464-465
14	Cytoskeleton	513-542	
15	Cilia and flagella	513-542	
16	Cellular contractility	513-542	
17	The nuclear envelope	455-456 517-518	
18	Chromatin structure	250-255	
19	Centrioles, RNA synthesis, ribosome biosynthesis	521-522, 263, 212-224 227-230	
20	Eucaryotic cell cycle and control of the cell cycle	549-550 571-581	
21	Mitosis and cytokinesis	552-563	
22	Cancer cell biology	582-589	