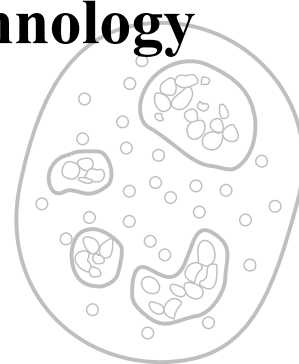
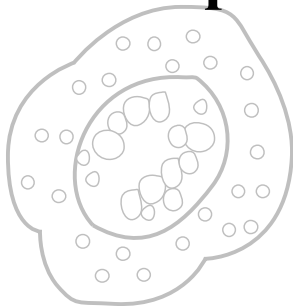


**Grande Prairie Regional College**

**Dept. of Science & Technology**



**BI 2010**

**Cellular Biology**

**Course Outline**

**Winter 2003 - 2004**

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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.

**Schedule:** Monday & Wednesday 1430-1550 hrs J202

**Pre-requisites:** BI 1070

**Pre-requisite/Co-requisite:** CH 1610 or CH 2610

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

**Textbook:** “The World of the Cell” (2003)  
Becker, Kleinsmith and Hardin  
*Benjamin Cummings*

This text is intended to supplement the lecture notes, not substitute for them. **It is expected that students read both the pages listed in the Lecture Outline along with other relevant sections of the text.**

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

Quizzes will be given during class time, and designed to test your knowledge of terminology.

Any assignments will be concerned with the medical aspects of material being covered in the course.

**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 and samples of exams (University of Alberta) are available on the Internet at the address:

<http://www.biology.ualberta.ca/courses.hp/bio201/bio201.htm>

## Lecture Outline - BI 2010

TOPIC		READINGS
		“The World of the Cell”
1	Introduction Methods in Cell Biology	5-20, 92, 168-169, 180-181, 321, 327-330, 353-354, 358-359, 493-494, 525-527
2	ATP and energy interconversions	56, 369-373
3	Membrane structure and membrane transport Specific examples of membrane transport	Chapters 7 and 8
4	Extracellular Matrix and Cell junctions	290-318
5	Intracellular compartments: endoplasmic reticulum	85-94 Chapter 12
6	Intracellular compartments: golgi, lysosomes, peroxisomes, vesicular transport	
7	Protein sorting and targeting	
8	Endocytosis and exocytosis	
9	Lysosomal Storage Diseases	
10	Cytoskeleton	95-97, Chapter 22
11	Cilia and flagella	773-777
12	Mitosis and cytokinesis	544-554
13	Cellular contractility	779-798
14	The nucleus and ribosomes	84, 510-518
15	Chromatin structure	491-509
16	Eucaryotic cell cycle and control of the cell cycle	554-561
17	Cancer cell biology	562-570

The pages listed above refer only to those sections of the text which will be covered directly in class. Other sections of the text are relevant and therefore should also be read by students.