



HUMAN CELL BIOLOGY--BIO315HF

University of Toronto at Mississauga

Note: Students are required to read the specific on-line lecture material before coming to lecture. In lecture I will not review all of the details covered in that online material but instead will focus on the important concepts and their relevance. In tutorials, we will cover topics that complement the lecture content.

LECTURE SCHEDULE 2011 SUMMER

Part I. Cell Adhesion, Communication and Signal Transduction

May 9	1. Introduction to Human Cell Biology
	2. The Human Cell Membrane
May 11	3. Junctional Adhesion Complexes: Skin, Guts, Heart & Sperm
	4. Gap Junctions and Communication in the Heart & Glands
May 16	5. Cell Adhesion Molecule: Types & Functions
	6. Signal Transduction & Erectile Dysfunction
May 18	7. cAMP Signal Transduction: Sugar Mobilization & Diabetes
	8. Muscarinic Receptors: This Lecture Ends in Tears
May 23	Victoria Day: No Class

Part II. The Cytoskeleton, Intracellular Trafficking & Disease

May 25	MID-TERM TEST
May 30	9. Calcium & Calmodulin Signalling: Memory and Alzheimer's Disease
	10. Motoring Along on Microtubules Supplementary Material: Lectures 9 & 10
June 1	11. Allergens & Myosins; Actin and Infection
	12. Leukocytes, WASPs and ROCK & Rho
June 6	13. Influenza Virus and HIV Cell Entry
	14. Lysosomes: Death by Enzyme Malfunction
June 8	15. Tay Sachs: A Protein Targeting Disease
	16. COPs, SNARES, Rabs & Huntington's Disease
June 13	17. The Cell Biology of Cancer
	18. EGFR Signaling and Breast Cancer
June 15	19. Nucleocytoplasmic Transfer
	20. Nuclear and Nucleolar Localization Sequences

Final Exam (3 hours; during final exam period)

Textbook: No Textbook is required because there are none available on human cell biology or that cover the subject matter in the way this course does; any recent Cell & Molecular textbook will suffice; students are also encouraged to use the library resources to check for recent review articles on topics covered in the course.

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