

**BIOM 600 Cell Biology and Biochemistry
Fall 2018**

- Course Coordinator:** Kurt A. Engleka, PhD (“Ingelkay” hard “g”)
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- Weekly Office Hours:** Kurt A. Engleka, PhD
Thursdays, 3:00 pm – 5:00 pm, 09-134 SCTR
(also by appointment)
- Nadia Kadry
Fridays, 2:00 pm – 4:00 pm, 09-134 SCTR
- Alexandra (Alex) Perry
Mondays, 2:00 pm – 4:00 pm, 09-134 SCTR
- Fabiana Zappala
Tuesdays, 4:00 pm – 6:00 pm, 09-134 SCTR
- Textbook:** **Molecular Biology of the Cell**, Eds. Alberts, et al. 6th edition
(recommended but not required)
- Lectures:** Monday, Wednesday, and Friday – 10:30 am – 11:50 am
CRB Austrian Auditorium.
- On-Line Lectures** Prerecorded and available on Mediasite
- Small Group Sessions:** Attendance is mandatory (Austrian Auditorium, JMB Class of '62
in John Morgan, 253 BRB as assigned)
- Biochemistry Quiz:** Open notes/on-line. To be completed by September 17, 2018
- Lecture Assessments:** Open notes/on-line as assigned.
- Exams:** Wednesday, Nov 14 and Monday, Dec 19
Rubenstein Auditorium, SCTR
10:30 am – 12:30 pm

Please see the Course Overview document for further information.

THEME I: INFORMATION FLOW AND SIGNAL TRANSDUCTION

Prerecorded		
Mediasite	Protein Purification (9-4-13)	Mike Ostap
Mediasite	Immunological Techniques (9-6-13)	Mickey Marks
Mediasite	Basics of Protein Structure and Folding (9-9-13)	Kate Ferguson
Wed, Aug 29	Course Introduction/Keynote	Arjun Raj
Fri, Aug 31	Experimental Design (Small Groups)	TAs
Mon, Sep 3	No Class (Labor Day)	
Wed, Sep 5	Experimental Design (Small Groups)	TAs
Fri, Sep 7	G-Protein Coupled Receptors and G-Proteins	Dave Manning
Mon, Sep 10	Tyrosine Kinase and Phosphatases	John Seykora
Wed, Sep 12	Small GTPases and Phosphoinositides	Margaret Chou
Fri, Sep 14	Serine and Threonine Kinases	Frank Lee
Mon, Sep 17	Nuclear Receptor Signaling	Mitch Lazar
Wed, Sep 19	Protein-Protein Interactions	Ronen Marmorstein
Fri, Sep 21	Ubiquitin-Mediated Proteolysis	Luca Busino
Mon, Sep 24	Calcium Signaling and Phospholipases	Kevin Foskett

THEME II: COMPARTMENTATION

Prerecorded		
Mediasite	Basics of Imaging (9-12-13)	Andrea Stout
Wed, Sep 26	Advanced Imaging	Andrea Stout
Fri, Sep 28	Biological Membranes (Small Groups)	TAs
Mon, Oct 1	Protein Folding and Assembly in the Endoplasmic Reticulum	Mickey Marks
Wed, Oct 3	Mechanisms of Vesicular Transport	Mickey Marks
Fri, Oct 5	Protein Biogenesis and Translocation into the Endoplasmic Reticulum	Jeremy Wilusz
Mon, Oct 8	Small Groups	TAs

Wed, Oct 10	Golgi Function and Protein Sorting in the Secretory Pathway (Small Groups)	TAs
Fri, Oct 12	Exocytosis and Secretion (Small Groups)	TAs
Mon, Oct 15	Endocytosis and Lysosomal Degradation	Mickey Marks
Wed, Oct 17	Nuclear Architecture and Nucleocytoplasmic Transport	Ben Black
Fri, Oct 19	Mitochondria Function and Biogenesis	Andy Dancis
Mon, Oct 22	Small Groups	TAs

THEME III: THE CYTOSKELETON, ADHESION, AND MOTILITY

Wed, Oct 24	Microtubules	Erika Holzbaur
Fri, Oct 26	Microtubule-Based Motility	Erika Holzbaur
Mon, Oct 29	Actin Cytoskeleton	Roberto Dominguez
Wed, Oct 31	Myosins	Mike Ostap
Fri, Nov 2	Cell Adhesion	John Weisel
Mon, Nov 5	Cell/Extracellular Interactions	John Weisel
Wed, Nov 7	Intermediate Filaments	Paul Janmey
Fri, Nov 9	Mitosis and Cytokinesis	Erfei Bi
Mon, Nov 12	Exam Review	TAs
Wed, Nov 14	Theme III Exam – 100 points (Location TBA)	

THEME IV: SOLUTE TRANSPORT AND ION CHANNELS

Prerecorded Mediasite	Intro to Kinetics (10-11-13)	Rahul Kohli
Fri, Nov 16	Principles of Ion Transport	Kevin Foskett
Mon, Nov 19	Ion Channels 1	Toshi Hoshi
Nov 21-Nov 23	No Class (Thanksgiving Break)	
Mon, Nov 26	Ion Channels 2	Toshi Hoshi
Wed, Nov 28	Integrated Functions of Ion Channels	Kevin Foskett
Fri, Nov 30	Problem Set/Small Group	TAs

THEME V: CELL FATE

Mon, Dec 3	Apoptosis	Xiaolu Yang
Wed, Dec 5	Cell Cycle 1: Cyclins and CDKs	Frank Luca
Fri, Dec 7	Cell Cycle 2: The Rb-E2F Pathway	Rick Assoian
Mon, Dec 10	Autophagy	Sara Cherry
Wed, Dec 12	Metabolism	Zoltan Arany
Fri, Dec 14	Energy Homeostasis	Katy Wellen
Mon, Dec 17	Exam Review	TAs
Wed, Dec 19	Theme V Exam – 100 points (Location TBA)	

Faculty Lecturers

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