BIOL 3302: EUKARYOTIC MOLECULAR & CELL BIOLOGY
The University of Texas at Dallas
Spring, 2017 ver2

TEXT: Lodish *et al*., ***Molecular Cell Biology***, Seventh Edition, 2013 (ISBN 13: 978-1-4292-3413-9)
Or: Sixth Edition, 2008 (ISBN 0-7167-7601-4)
CLASS HOURS: Monday and Wednesday, 11:30 -12:45 pm, **SLC 2.303**

Dr. John. G. Burr: *Office:* FN 3.110 *Hours:* Thurs: 3:30-4:30 pm, or by appointment
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Dr. Uma Srikanth: *Office:* FN3.108 *Hours:* Mon. 10:00 – 11:00 am, or by appointment
Phone: 972-883-6570 *Email*: ukrish@utdallas.edu

Course Materials

Dr. Srikanth's course material and grades will be posted on **eLearning**.

Dr. Burr will post individual exam grades and the overall course grade on **eLearning**, but for all other course information (eg., links to lecture notes as pdf files, information on the type of scantron sheet to use for the exams, links to some additional reading of possible interest, etc), see the **course home page** that I have set up at this utdallas web site address:

http://www.utdallas.edu/~burr/BIO3302

Learning outcomes: Upon completing this course, students will:

1. Be able to diagram the structural organization of eukaryotic cells.
2. Be able to understand cell biology techniques
3. Be able to describe typical signal transduction pathways.
4. Be able to explain concepts such as secretion and endocytosis, the targeting proteins to cellular organelles, and the structure and function of the eukaryotic cytoskeleton.

TAs for workshops (BIO 3102)[1]:

Section #	Time/Location	TA Name
3102-001	Fri. 8:00-8:50 am/SLC 2.203	Ms. Pham, Kimmy
3102-002	Fri. 8:00-8:50am/FO 3.222	Ms. Humayara, Rifat
3102-003	Wed. 4:00-4:50 pm/ FO 3.616	Ms. Nguyen, Victoria
3102-004	Wed. 4:00-4:50 pm/FO 3.222	Mr. Rai, Vineet
3102-005	Tue. 4:00-4:50 pm/SLC 2.302	Mr. Ratevosyan, Richard
3102-006	Tue. 8:00- 8:50 am / FO 3.222	Mr. Nguyen, Khanh

All students enrolled in BIOL 3302 must also enroll in a workshop **(BIOL 3102).** *The grade for BIOL 3102 will be determined by a combination of attendance and homework grades, and it will be worth* ***10%*** *of the overall grade given for BIOL 3302. The same letter grade will be assigned for both the lecture and workshop components of the course. Do not blow off the workshop- it can drop your grade in the lecture part of the course (BIOL 3302) from an A to a B, or from a B to a C, etc. if you do poorly in the workshop.* ***The same grade will be assigned for both BIOL 3301 and BIOL 3302. If you drop the course, you must drop both 3302 and 3102.***

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[1] *All students enrolled in BIO 3302 must also enroll in a workshop (BIO 3102). If for any reason you decide to drop the BIO 3302,* ***you must also drop BIO 3102!***

Grading policies

There will be four exams given in BIOL 3302. The exam questions will be a combination of multiple-choice plus brief essay or short-answer questions. Each of the four exams will be worth 22.5% of the final grade, and each will cover all of the material presented in class since the previous exam (lectures, handouts, and assigned reading), for a total of ***90%****. The remaining* ***10%*** *of your grade is from the workshops- homeworks, etc. Scoring on the exams is done by the graduate Teaching Assistants, but the Instructor determines in advance what key points must be included in each answer to get full credit. The Instructor checks your scores after the TA has graded the exams, and assigns letter grades. Please note that no exam score is dropped from the final grade calculation.*

If you have questions about the grading or your performance in an exam, please see the instructors as soon as possible. Although letter grades may be provided after each exam, these should be treated only as a reflection of your performance. ***The final course grade will be based not on these individual letter grades, but on the total of the numeric scores of all four exams and the homework****.*

Make- up EXAMS

These exams will be scheduled on a need only basis. If you are unwell and unable to attend the exam, please email the instructor at the earliest available opportunity. Also, please remember to bring a copy of the doctor's note on the day your make-up exam is scheduled. These exams will be scheduled to the convenience of the teaching assistants (graduate) or the instructor.

EXAM VIEWING OFFICE HOURS*:*

Instructors will send announcements on elearning about office hours for viewing exams after they have been graded. Please be sure to come and visit the instructor during these hours. If the allotted time is in conflict with your classes, please email instructor in advance for an alternate time. No grade changes will be made three weeks after the date of the exam.

SCHEDULE OF LECTURES

Bio 3302, Spring 2017

Dates	Session	Instructor	Topics	Reading
Mon, Jan 9	1	Srikanth	Introduction and Cell Biology Techniques	Chapter 9
Wed, Jan 11	2	Srikanth	Cell Biology Techniques	Chapter 9
Mon, Jan 16	--	--	**MLK Holiday**	--
Wed, Jan 18	3	Srikanth	Cell Biology Techniques	Chapter 9
Mon, Jan 23	4	Srikanth	Biomembrane Structure	Chapter 10
Wed, Jan 25	5	Srikanth	Biomembrane Structure and Transport of Ions and Small Molecules **HW 1 is due on 1/25/17**	Chapters 10& 11
Mon, Jan 30	6	Srikanth	Review	
Wed, Feb 1	**7**	**Srikanth**	**EXAM 1 (Chapters- 9, 10)**	
Mon, Feb 6	8	Srikanth	Transport of ions and small molecules	Chapter 11
Wed, Feb 8	9	Srikanth	Transport of ions and small molecules **HW 2 is due on 2/8/17**	Chapter 11
Mon, Feb 13, Wed, Feb 15	10, 11	Srikanth	General Principles of Cell Signaling & G protein coupled Signaling	Chapters 15
Mon, Feb 20, Wed, Feb 22, Mon, Feb 27, Wed Mar 1	12, 13, 14,15	Srikanth	G protein coupled Signaling **HW 3 is due on 2/22/17** Signaling pathways that control gene expression **HW 4 is due on 3/2/17**	Chapter 15 Chapter 16
Mon, Mar 6	**16**	**Srikanth**	**EXAM 2 (Chapters- parts of 11, 15, parts of 16)**	
Wed, Mar 8	17	J. Burr	Moving proteins into membranes & organelles	Chapter 13
M – F Mar 13-17			**SPRING BREAK HOLIDAY**	
Mon, Mar 20 Wed, Mar 22 Mon, Mar 27	18, 19, 20	J. Burr	Vesicular traffic, secretion & endocytosis	Chapter 14
Wed, Mar 29, Mon, Apr 3	21, 22,	J. Burr	Cytoskeleton: actin filaments in muscle cells	Chapter 17
Wed, Apr 5	23	J. Burr	Cytoskeleton: actin filaments in non- muscle cells (1)	Chapter 17
Mon, Apr 10	**24**	**J. Burr**	**EXAM 3 (Chapters 13 & 14; part of Ch 17: Actin in muscle cells)**	
Wed, Apr 12	25	J. Burr	Cytoskeleton: actin filaments in non- muscle cells (2)	Chapter 17
Mon, Apr 17	26	J. Burr	Regulation of actin polymerization in vitro	Chapter 17
Wed, Apr 19; Mon, Apr 24	27, 28	J. Burr	Microtubules; intermediate filaments	Chapter 18
Wed, April 26	**29**	**J. Burr**	**EXAM 4 (Ch 17: Actin in non-muscle cells, etc; Ch 18: MT's, IF's)**	