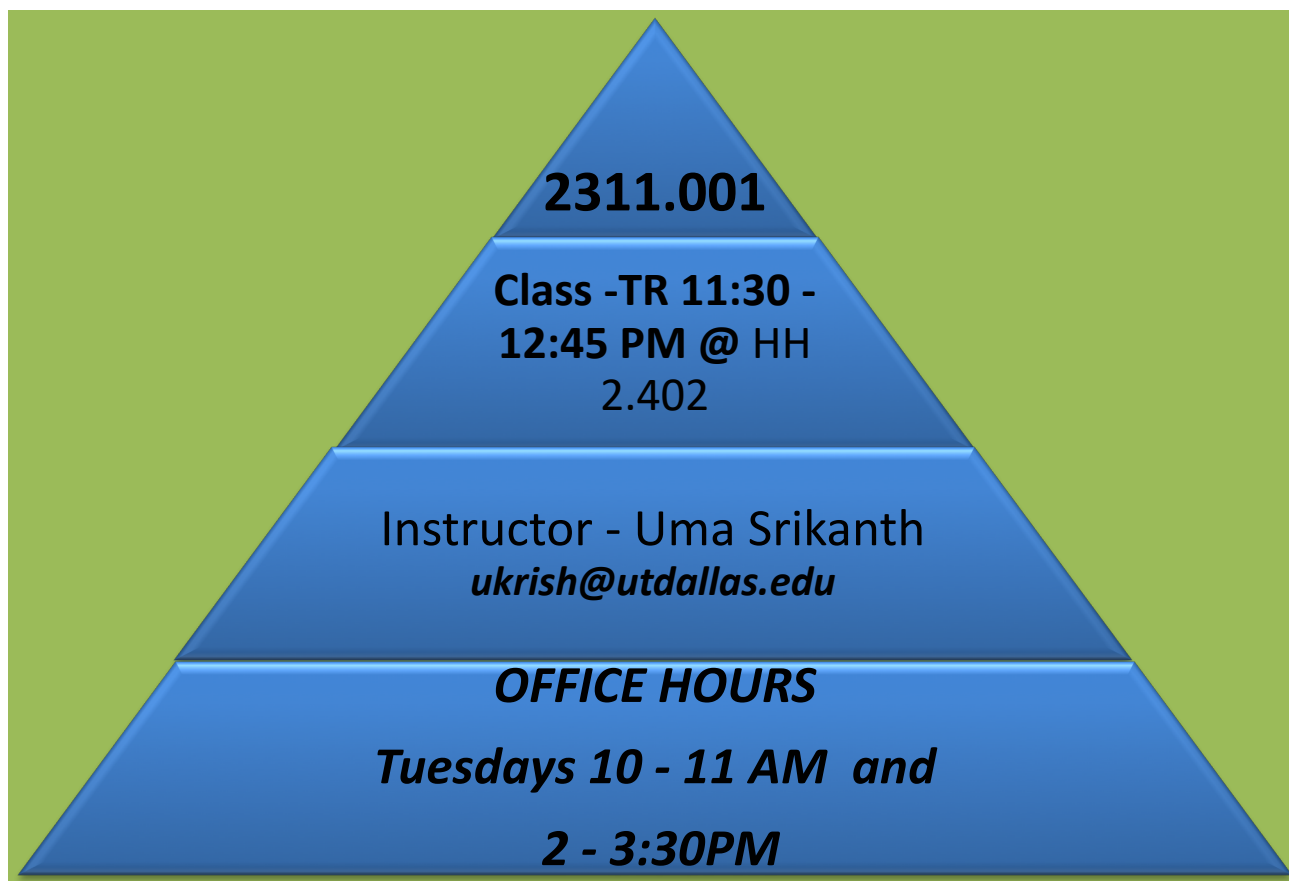


INTRODUCTION TO MODERN BIOLOGY CLASS – 2311.001



Course Description:

Biology 2311 – This course presents some of the basic concepts of modern Biology with an emphasis on the molecular and cellular basis of biological phenomena. Topics include metabolism of biological macromolecules, cell structure and function, cellular respiration, cell division, cell cycle, cell signaling, classical and molecular genetics, and DNA replication, transcription, and translation. Some landmark experiments that will help provide an in depth understanding of the concepts will be discussed.

Student Learning Outcomes:

- 1. Students will be able to define the subcellular structures, macromolecules in a eukaryotic cell*
- 2. Students will be able to explain and describe the basic functions of cells including energy production and utilization (in animal and plant cells), cell division, the basic mechanisms of genetic inheritance, structure of DNA, discovery of DNA, transcription and translation process, the regulation of gene expression, and selected aspects of the molecular basis of cancer.*

3. Students will be able to understand basic cell signal transduction pathways and their final responses inside cells

4. Students will be able to develop hypotheses to interpret experimental observations and devise experiments to test these hypotheses.

Textbook and online tool for the course:

Required: Biology by Russell, 4th edition and the online access tool, MindTap

There are several purchase options for the book and the online access tool as a bundle and/or separately

You may buy the Loose-Leaf Bundle, Hardback Bundle or the eBook Bundle:

Loose-Leaf Bundle

Russell/Hertz/McMillan - Bundle: Biology: The Dynamic Science, Loose-leaf Version, 4th + LMS Integrated for MindTap® Biology, 2 terms (12 months) Printed Access Card

9781337086929

Hardback Bundle

Bundle: Biology: The Dynamic Science + LMS Integrated for MindTap®, 2 terms (12 months) Printed Access Card

9781305934160

MindTap Access Code with eBook

Russell - LMS Integrated for MindTap® Biology, 2 terms (12 months) Printed Access Card for Russell/Hertz/McMillan's Biology: The Dynamic Science

9781305881921

OR The Cengage Unlimited SUBSCRIPTION

[Cengage Unlimited](#) subscription. With a Cengage Unlimited subscription, you will have access to ALL Cengage eBooks and digital learning products. Cengage Unlimited has a 4-month subscription, a 12-month subscription or \$ a 24-month subscription. Students on Financial Aid can purchase a Cengage Unlimited subscription from the **UT-Dallas** bookstore. Cengage Unlimited subscriptions are also available at Cengage.com.

- ❖ Before you purchase your Cengage Unlimited subscription in the **UT-Dallas** Bookstore or at cengage.com, check out which other courses at UT-Dallas are using Cengage products, and therefore eligible in the Cengage Unlimited subscription, here: https://www.cengage.com/coursepages/unlimited_utdallas.
- ❖ **Print rental:** You will be eligible for a [print rental](#) when you activate MindTap and subscribe to Cengage Unlimited. All you will pay is \$7.99, which includes shipping.
- ❖ **Loose-leaf keep:** For print you can keep, purchase a [loose-leaf version of the textbook at a discount through Cengage Unlimited](#). Loose-leaf shipping is free when purchased with Cengage Unlimited.

Bonus: When your Cengage Unlimited subscription ends, you can keep up to six eBooks in a digital locker and access them for one year. (Introductory offer). **Extra Help:** cengage.com/start-strong

WORKSHOPS:

Registration in BIOL 2311 requires registration in BIOL 2111 and vice versa. If you do decide to drop BIOL 2311, please be sure to drop the workshop as well. **Workshops and office hours will begin the week of August 26, 2019.**

Please be sure that you have registered in one of the following workshop sections if you are attending this section of Biology 2311.001

WORKSHOP	TIME AND DAY	ROOM #	Undergraduate Teaching ASSISTANT
BIOL 2111-008	Fr 4:00 - 4:50PM	FN 2.104	Aamerah Haque/Cindy Folefack
BIOL 2111-009	Th 4:00 – 4:50 PM	FN 2.106	Yushra Rashid
BIOL 2111-010	Fr 9:00 - 9:50AM	ECSN 2.110	Anagha Sanne
BIOL 2111-011	Mo 11:00 – 11:50 AM	FO 3.616	Rabab Isa
BIOL 2111-012	Fr 11:00 –11:50 AM	FN 2.202	Nedeke Ntekim
BIOL 2111-013	Mo 9:00 – 9:50AM	FN 2.106	Adiva Sahar
BIOL 2111-014	Th 8:30 – 9:20 AM	FN 2.104	Aneesh Bahadur

Graduate teaching assistants :

Ishwarya Sankaranarayanan,

Parinazsadat Alemi,

Khyati Chandratre,

Jonathan Carey, and

Sharwari Phanse.

TENTATIVE SYLLABUS:

Lectures are 75 minutes each. You need not bring your textbook to the lectures. Please note that attendance is highly recommended. Green highlights are assignment (A) due dates and yellow are Exams. Lectures have (L) next to the dates.

	Lecture (L) & Assignment (A) dates	MindTap Pre-assessments Due date	Lectures	Chapter #'s	MindTap Post-assessments/ Conceptual activity or both Due date	Quizzes
Week 1	Aug 20 (L)	none	Introduction and Chemical Building Blocks of Life	3	none	
	Aug 22 (L)	none	Chemical Building Blocks	3		
	Aug 25 (A)	<u>Chapter 4</u>				
Week 2	Aug 27 (L)		Cells	4		
	Aug 29 (L)					QUIZ 1 (Chapter 3 parts)
	Sept 1 (A)		Cells	4	<u>Chapter 3</u>	
	Sept 1 (A)	<u>Chapter 5</u>				
Week 3	Sept 3 (L)		Membranes and Transport	5		
	Sept 5 (L)		Membranes and Transport	5		
	Sept 8 (A)				<u>Chapter 4</u>	
	Sept 8 (A)				<u>Chapter 5</u>	
	Sept 8 (A)	<u>Chapter 6</u>				
Week 4	Sept 10(L)		Energy	6		QUIZ 2 (parts of 3, Chapter 4 and parts of Chapter 5)
	<u>Sept 12</u>	<u>EXAM 1</u>		<u>Chapters 3,4,5</u>		
	Sept 15 (A)	<u>Chapter 7</u>				
Week 5	Sept 17 (L)		Cellular Respiration	7		
	Sept 19 (L)		Cellular Respiration	7		
	Sept 22 (A)				<u>Chapter 6</u>	
	Sept 22 (A)	<u>Chapter 9</u>				

Week 6	Sept 24 (L)		Cellular Respiration	7		
	Sept 26 (L)		Cell - cell communication	9		QUIZ 3 (Chapter 7)
	Sept 29 (A)				Chapter 7	
	Sept 29 (A)	Chapter 10				
Week 7	Oct 1 (L)		Cell – cell communication	9		
	Oct 3 (L)		Mitosis	10		
	Oct 6 (A)				Chapter 9	
Week 8	Oct 8 (L)		Mitosis	10		QUIZ 4 (Chapter 9)
	Oct 10	EXAM 2		Parts of 6,7,9, parts of 10		
	Oct 13 (A)				Chapter 10	
	Oct 13 (A)	Chapter 11				
Week 9	Oct 15 (L)		Meiosis	11		
	Oct 17 (L)		Meiosis	11		
	Oct 20 (A)				Chapter 11	
	Oct 20 (A)	Chapter 12				
Week 10	Oct 22 (L)		Mendelian Inheritance	12		QUIZ 5 (Chapters 10 and 11)
	Oct 24 (L)		Mendelian Inheritance	12		
	Oct 27 (A)				Chapter 12	
	Oct 27 (A)	Chapter 13 Chapter 14 – Focus: Avery experiment				
Week 11	Oct 29 (L)		Genes, Chromosomes , and Human Genetics	13		
	Oct 31 (L)		DNA – The Genetic Material	14		6 (Chapter 12)
Week 12	Nov 5	EXAM 3		Parts of Chapter 10, Entire chapters 11,12,and parts of 13		
	Nov 7 (L)		DNA – Discovery	14		
	Nov 10 (A)	Chapter 15 – 2 Assignments				
Week 13	Nov 12 (L)		DNA Replication	14		

	Nov 14 (L)		DNA REPAIR and From DNA to Protein	14 and 15		7 (parts of Chapter 14)
	Nov 17 (A)				<u>Chapter 14</u>	
Week 14	Nov 19 (L)		FROM DNA to Protein	15		
	Nov 21 (L)		Regulation of Gene Expression	16		
	Nov 24 (A)	<u>Chapter 16</u>			<u>Chapter 15</u>	
Week 15	Nov 26 (L)		FALL BREAK HOLIDAY			
	Nov 28 (L)		THANKSGIVING DAY			
	Dec 1 (A)	<u>Chapter 18</u>				
Week 16	Dec 3 (L)		Regulation of Gene Expression	16		
	Dec 5 (L)		DNA Technologies	18		8 (Chapters 15 and parts of 16)
	Dec 8 (A)				<u>Chapter 16</u>	
	<u>TBD</u>	<u>EXAM IV</u>	<u>11 AM – 1:45 PM</u>	<u>14, 15, 16, and 18</u>		

EXAM DATES:

<u>EXAM 1</u>	<u>Chapters 3,4,5,and parts of 6</u>	<u>9/12/2019</u>
<u>EXAM 2</u>	<u>Chapters 7,9, and parts of 6 and 10</u>	<u>10/10/2019</u>
<u>EXAM 3</u>	<u>Chapters parts of 10,11,12 and parts of 13</u>	<u>11/5/2019</u>
<u>EXAM 4</u>	<u>Chapters 14,15,16 and 18</u>	<u>TBD</u>

QUIZZES:

1. *There are a total of 8 quizzes.*
2. *Quizzes will be given at the end of the lecture session.*
3. *Each QUIZ is worth 10 points.*
4. *QUIZZES are a combination of multiple choice, T/F, fill-in the blank, short answers, and mix-and-match style questions.*
5. *You will have 7-9 minutes to complete the quiz.*
6. *Graded quizzes will be returned in workshops and the correct answers will be discussed by teaching assistants.*
7. ***No quiz grades will be dropped***
8. *There is one surprise free quiz.*
9. *All 8 quizzes will account for 7.5% of your final grade*

MindTap ASSIGNMENTS:

Assignment details will be posted on elearning. All these assignments (pre, post and other) together will account for 12.5% of your final grade. Assessments will not be accepted past the due date. Please keep checking the elearning course page for links to take you to the date view for assessments for every chapter. Please note that the assessments will be released in blocks according to the syllabus.

PRE-ASSESSMENTS:

1. These are assessments before the chapter is discussed in lecture.
2. These assessments may be assigned every week.
3. These assessments may be set up for grading. When it is set up for grading, the grade will carry over to your gradebook. However your points for these pre-assessments are not based on how many questions you answered correctly (how many points you received) rather if you completed the full question set. Partial completion will receive no points.
4. If you incur technical difficulties, please email me the day before the assessment is due.
5. These assessment links can be found on the elearning course page. These links will be organized by Chapter numbers. **USE THIS LINK TO ACCESS AND COMPLETE YOUR ASSESSMENT.**

POST-LEARNING AND OTHER ASSESSMENTS (CONCEPTUAL ACTIVITY) AFTER CHAPTER IS DISCUSSED IN LECTURE:

1. *These are assessments after the Chapter is discussed in lecture*
2. *These may be assigned every week.*
3. *These are graded assignments only (with exceptions).*
4. **Post Assessments** *may be set up for up to three attempts and the best score will be recorded.*

5. **Conceptual Activities** may be graded or for practice only. The number of attempts varies for each assignment.
6. The assessment links can be found on the elearning course page under Chapter numbers. PLEASE USE THESE LINKS TO DO YOUR ASSESSMENTS.
7. Once you have completed the assessment, it will populate in your gradebook automatically (only if it set up as a graded assignment). (Please note that if you log into MindTap/Cengage and do your assessment, your grade might not effectively transfer over to elearning).
8. These assessments may be timed.
9. If you incur technical difficulties, please email me the day before the assignment is due.

EXAMS:

1. There are four exams in this course.
2. All four EXAMS are required.
3. Each EXAM will be 50 points worth.
4. EXAM DATES are shown in the syllabus.
5. The LAST EXAM (Date -TBD) is not cumulative.
6. All EXAMS will cover chapters taught in prior lectures.
7. EXAMS will be structured as a mixture of multiple choice, T/F, Fill-in the blanks, Mix and match, and a few short answer questions.
8. You will need a scantron and I will make an announcement about this on elearning.
9. Graded Exams will not be reviewed in workshops.
10. You will receive your graded exams for viewing in workshops. After viewing, you will return your exams to the teaching assistants.
11. The instructor will hold office hours to view and discuss your exams with her.
12. Details on office hours for EXAM Review will be posted on elearning. For further details on office hours for Exams, see below.
13. If requesting a make-up for any of the four exams due to extracurricular activities or team sport activities, please contact me two weeks prior to the exam date.
14. For Exam purposes only, when there are conflicts between the information contained in the book and the information contained in the power point lectures, material presented in the lectures by the instructor will be considered correct.
15. Please see below for MAKE-UP Exam rules.
16. NO EXAM GRADE WILL BE DROPPED FROM THE FINAL GRADE CALCULATION

GRADE DISTRIBUTION

The midterm and final grades assigned to the lecture section of the course (BIOL 2311.001) will be assigned to your workshop course (BIOL 2111-) as well.

	<i>Total #</i>	<i>points for each</i>	<i>Dropped/free quiz</i>	<i>Maximum possible points</i>	<i>% of final grade</i>
<i>Lecture Exams</i>	<i>4</i>	<i>50</i>	<i>0</i>	<i>200 (four exams are weighted equally)</i>	<i>80% (weighted)</i>
<i>QUIZZES</i>	<i>8</i>	<i>10</i>	<i>1</i>	<i>80</i>	<i>7.5% (weighted)</i>
<i>Pre-Assessments</i>	<i>14</i>	<i>varied</i>	<i>None</i>	<i>Varied points but completion only</i>	<i>5% (weighted)</i>
<i>Post-chapter assessments/ Conceptual activities</i>	<i>>12</i>	<i>varied</i>	<i>None</i>	<i>Varied and graded</i>	<i>7.5% (weighted)</i>
			<i>TOTAL</i>	<i>Total points</i>	<i>100% (weighted)</i>

Although letter grades may be provided after each exam, these should be treated only as a reflection of your relative performance when compared to the rest of the class. The final course grade will not be based on these individual letter grades, but on the total of the numeric scores of all four exams, the quizzes and the assessments. There is no work available for extra credit for this course.

Grading Policies:

Incomplete Grades (I)

A grade of Incomplete may be given, at the discretion of the instructor of record for a course, when a student has completed at least 70% of the required course material but cannot complete all requirements by the end of the semester. An incomplete course grade (grade of 'I') must be completed within the time period specified by the instructor, not to exceed eight weeks from the first day of the subsequent long semester. Upon completion of the required work, the symbol 'I' may be converted into a letter grade (A through F) by the instructor. If the grade of Incomplete is not removed by the end of the specified period, it will automatically be changed to F.

Extension beyond the specified limit can be made only with the permission of the instructor, the student's Associate Dean and the Undergraduate Dean. A student may not re-enroll in a course in which a grade of 'I' remains.

Students may obtain a petition/documentation form for an Incomplete in the office of the student's Undergraduate Associate Dean. The form is to be submitted to the instructor from whom the Incomplete is sought. If a significant fraction of a semester is missed with cause, see the section on "Dropping and Withdrawing" at catalog.utdallas.edu/2017/undergraduate/policies/registration#dropadd.

An instructor assigning an Incomplete ('I') must submit the petition/documentation form containing a description of the work required to complete the course to the Undergraduate Associate Dean of the school offering the course. Upon approval, a copy of the petition will be forwarded to the student's Undergraduate Associate Dean to be retained with the student's academic record. The instructor alone will be responsible for determining whether the requirements for completion are met and for assigning a grade in the course.

However, if the instructor who has signed the Incomplete ('I') is no longer associated with UT Dallas and the work is completed within the time allowed before the Incomplete lapses to an F, the Associate Dean of the instructor's college may assign a committee of appropriate faculty to evaluate the material and/or obtain any other information that may be required to assign a grade in the course.

Mid-Term Grades

Students are issued mid-term grades to apprise them of their progress within the semester. Mid-term grades are important for advising and retention purposes, therefore it is vital that the grades accurately reflect academic progress. These grades are not a part of the permanent record and will not appear on academic transcripts. Some classes will only issue a grade of credit or no credit at mid-term.

'MN' grade is used for midterm grading only. It signifies that the instructor does not have enough information on a particular student to determine a midterm grade. It may not be used for final grading purposes.

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 OFFICE HOURS:

***These are separate from regular office hours and the Instructor will send announcements on elearning** about 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 the instructor in advance for an alternate time**. No grade changes will be made three weeks after the day the exam was administered.*

Religious Holy Days

The University of Texas at Dallas will excuse a student from class or other required activities for the observance of a religious holy day (including travel time) for a religion whose places of worship are exempt from property tax under Section 11.20, of the Texas Tax Code.

Students are encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment.

Excused students will be allowed to take missed exams or complete assignments within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.

*If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the **President** of UT Dallas or from the President's designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.*

Here are the links to UT Dallas policy on student conduct and syllabus:

<https://go.utdallas.edu/syllabus-policies>

<https://policy.utdallas.edu/utdsp5003>

Student Accessibility Services:

The details of the services and accommodations provided by the university and the point of contact for these services are listed in the link below:

<https://www.utdallas.edu/studentaccess/>

Supplemental Instruction (SI) is offered for this course. SI sessions are free group study opportunities, scheduled three times per week. These sessions are facilitated by an SI Leader, who has taken the course recently and has achieved a high final grade. This year's SI leader is **BRIAN TORRES**. Attendance is voluntary. For information about the days, times, and locations for SI sessions, refer to <http://www.utdallas.edu/studentsuccess/help-with-courses/supplemental-instruction/>

