



BIOL 2311.001 Introduction to Modern Biology I
FALL 2021 (AUGUST 22, 2022 – DECEMBER 8, 2022)

The University of Texas at Dallas

TEXTBOOK: Biology by Russell 5e

CLASS HOURS, LOCATION: Monday, Wednesday, Friday, 11:00 – 11:50 AM (SCI 1.220)

Dr. Uma Srikanth: Office: FN 3.108

Email: ukrish@utdallas.edu

Mondays and Tuesdays 12:45 – 1:45 PM - or by appointment only (Blackboard Collaborate)
(office hours begin the week of August 29, 2022)

Course Modality and Expectations

Instructional Mode- Lectures and workshops	Traditional Classroom face-to-face
EXAMS	EXAMS will be available for a very small window of time. See section titled Exams below.
QUIZZES	In the classroom during lectures

Course Policies:

Class Materials

The instructor may provide class materials that will be made available to all students registered for this class as they are intended to supplement the classroom experience. These materials may be downloaded during the course; however, these materials are for registered students' use only. Classroom materials may not be reproduced or shared with those not in class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the [Student Code of Conduct](#).

Class Attendance

The University's attendance policy requirement is that individual faculty set their course attendance requirements. Regular and punctual class attendance is expected. Students who fail to attend class regularly are inviting scholastic difficulty. In some courses, instructors may have special attendance requirements; these should be made known to students during the first week of classes.

Class Participation

Regular class participation is expected regardless of course modality. Students who fail to participate in class regularly are inviting scholastic difficulty. A portion of the grade for this course is directly tied to your participation in this class. It also includes engaging in group or other activities during class that solicit your feedback on homework assignments, readings, or materials covered in the lectures (and/or labs). Class participation is documented by faculty. Successful participation is defined as consistently adhering to university requirements, as presented in this syllabus. Failure to comply with these University requirements is a violation of the [Student Code of Conduct](#).

Class Recordings

Students are expected to follow appropriate University policies and maintain the security of passwords used to access recorded lectures. Unless the Office of Student AccessAbility has approved the student to record the instruction, students are expressly prohibited from recording any part of this course. Recordings may not be published, reproduced, or shared with those not in the class, or uploaded to other online environments except to implement an approved Office of Student AccessAbility accommodation. Failure to comply with these University requirements is a violation of the [Student Code of Conduct](#).

The instructor may record meetings of this course. These recordings will be made available to all students registered for this class if the intent is to supplement the classroom experience. If the instructor or a UTD school/department/office plans any other uses for the recordings, consent of the students identifiable in the recordings is required prior to such use unless an exception is allowed by law.

Classroom Citizenship Comet Creed

This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

“As a Comet, I pledge honesty, integrity, and service in all that I do.”

Academic Support Resources

The information contained in the following link lists the University’s academic support resources for all students.

Please see <http://go.utdallas.edu/academic-support-resources>.

UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University’s policies and procedures segment of the course syllabus. Please review the catalog sections regarding the [credit/no credit](#) or [pass/fail](#) grading option and withdrawal from class. Please go to <http://go.utdallas.edu/syllabus-policies> for these policies.

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.

Objectives:

- Critical Thinking (CT)**—to include creative thinking, innovation, inquiry, and analysis, evaluation, and synthesis of information
- Communication (COM)**—to include effective development, interpretation, and expression of ideas through written, oral, and visual communication
- Empirical and Quantitative Skills (EQS)**—to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions
- Teamwork (TW)**—to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal

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.

Course Co-requisites, Pre-requisites, and/or Other Restrictions:

Co-requisite: concurrent enrollment in BIOL 2111.

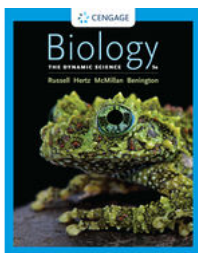
Prerequisites for this course are General Chemistry I and II.

Course Materials

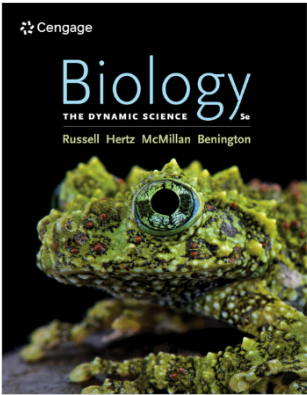
Power point lectures and grades will be posted on eLearning. Please look for the Cengage/MindTap link in Elearning.

Textbook and online tool for the course:

Required: Biology by Russell, 5th edition and the online access tool, MindTap v2.0



Options to purchase course materials: When you try to register in MindTap using the link on the Elearning course page, you will see a page like this:



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[VIEW AS INSTRUCTOR](#)

MindTap: Biology: The Dynamic Science

\$105.00

[More about MindTap](#)

-  MindTapV2.0 for Biology: The Dynamic Science 6 Months \$105.00
ISBN: 9780357438435
-  MindTapV2.0 for Biology: The Dynamic Science 12 Months \$119.00
ISBN: 9780357438466

[ADD TO CART](#)

Before purchasing, make sure your instructor has assigned this online homework platform.

Depending on the option you choose (shown in red), you will have access to the online tool and the ebook for either Fall 2022 only or for both Fall 2022 and Spring 2023. This will account for students planning to take 2311 in Fall and 2312 in Spring.

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, or a 12-month Unlimited subscription from the **UT-Dallas** bookstore. Cengage Unlimited subscriptions are also available at Cengage.com.

All students enrolled in BIOL 2311 must also enroll in a workshop (BIOL 2111). Homework assignments and quizzes may be reviewed during workshop. Questions remaining about lecture material will be addressed during workshop. The same grade will be assigned for both BIOL 2311 and BIOL 2111. If you drop the course, you must drop both 2311 and 2111.

All students enrolled in BIOL 2311 must also enroll in a workshop (BIOL 2111). If for any reason you decide to drop BIOL 2311, you must also drop BIOL 2111!

WORKSHOPS

Workshops run every week unless announced by the Instructor on Elearning.

WORKSHOPS BEGIN THE WEEK OF AUGUST 29, 2022

<u>WORKSHOPS</u>	<u>TIMES/Room #</u>	<u>UNDERGRADUATE TA</u>	<u>Email ID@utdallas.edu</u>
2111- 001	Fr 1:00 – 1:50 PM/FO 3.222	Amir S	Amir.Shaygan
2111- 002	Fr 2:00 – 2:50 PM/FO 3.222	Zara S	Zara.Siddiqui
2111- 003	Mo 4:00 – 4:50 PM/SCI 2.215	Khadija Shariff	Khadija.Shariff
2111-004	Fri 4:00 – 4:50 PM/SCI 2.215	Zaid M	Zaid.Memon
2111- 005	Th 4:00 – 4:50 PM/SCI 2.225	Fareeha F	Fareeha.Faruk
2111-006	Fr 9:00 – 9:50 AM/SLC 2.304	Eesha D	Eesha.Desai
2111- 007	We 1:00 – 1:50 PM/FO 3.222	Sumanth K	Sumanth.Kulkarni
2111-008	Tu 10:00 – 10:50 AM/FO 3.222	Arlin Khan	Arlin.Khan
2111-009	Mo 9:00 – 9:50 AM/SLC 1.202	Sakshi Mohta	Sakshi.Mohta

DREAM TEAM TAs': Abhinay Adlooru, Ahmed Abdi, Haniah Bashir, Nicole Kuo, Deepika Yerva, and Nathan Nguyen

Graduate Teaching Assistants: Sharon Kwende, Edmund Miller, Bhavitha Moturu, Ritik Patel, Maitri Murali, Dibyo Maiti, and Junyu Liu.

Our Undergraduate Teaching Assistants (UGTAs) will be leading the workshops under the supervision of the instructor. Graduate Student Teaching Assistants (GTAs) will be responsible for grading of tests, if needed. Our GTAs will grade based on the rubric provided by the instructor. The final letter grades are ASSIGNED BY THE INSTRUCTOR. Midterm grades will be assigned depending on the instructor's grading guidelines and letter grade assignments

SCHEDULE OF LECTURES

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.

	Lectures		Chapter Names	Chapter #’s	Quizzes
Week 1	1	Aug 22	Introduction and Biological Molecules	3	
	2	Aug 24	Biological Molecules	3	
	3	Aug 26	Biological Molecules	3	
		Assignments due August 27	Check Elearning		
Week 2	4	Aug 29	Biological Molecules	3	
	5	Aug 31	Biological Molecules	3	
	6	Sept 2	Cells	4	
		Assignments due Sept 3	Check Elearning		
Week 3		Sept 5	Labor Day Holiday		
	7	Sept 7	Cells	4	Quiz 1 Lectures 1-5
	8	Sept 9	Cells	4	
		Assignments due Sept 10	Check Elearning		
Week 4	9	Sept 12	Cells and Membranes and Transport	4, 5	Quiz 2 Lectures 6 - 8
	10	Sept 14	EXAM 1		Lectures 1 - 9
	11	Sept 16	No lecture		
Week 5	12	Sept 19	Membranes and Transport	5	
	13	Sept 21	Energy	6	
	14	Sept 23	Energy	6	
		Assignments due Sept 24	Check Elearning		
Week 6	15	Sept 26	Cellular Respiration	7	Quiz 3 Lectures 12 - 14
	16	Sept 28	Cellular Respiration	7	
	17	Sept 30	Cellular Respiration	7	
		Assignments due Oct 1	Check Elearning		
Week 7	18	Oct 3	Cell Division - Mitosis	10	
	19	Oct 5	Mitosis	10	Quiz 4 Lectures 15 -18

	20	Oct 7	Meiosis	11	
		Assignments due Oct. 8	Check Elearning		
Week 8	21	Oct 10	EXAM 2		Lectures 12 - 20
	22	Oct 12	Cell Cycle	10	
	23	Oct 14	Cell – Cell Communication	9	
Week 9	24	Oct 17	Cell- Cell Communication	9	
	25	Oct 19	Mendelian Genetics	12	
	26	Oct 21	Mendelian Genetics	12	Quiz 5 Lectures 22 - 25
		Assignments due Oct. 22	Check Elearning		
Week 10	27	Oct 24	Mendelian Genetics	12	
	28	Oct 26	Genes, Chromosomes and Human Genetics	13	
	29	Oct 28	Genes, Human Chromosomes, and Human Genetics	13	Quiz 6 Lectures 26 - 29
		Assignments due Oct. 29	Check Elearning		
Week 11	30	Oct 31	Genes, Human Chromosomes, and Human Genetics	13	
	31	Nov 2	DNA Discovery	14	
	32	Nov 4	EXAM 3		Lectures 22 - 31
Week 12	33	Nov 7	DNA Replication	14	
	34	Nov 9	DNA Replication	14	
	35	Nov 11	DNA Replication	14	
		Assignments due Nov 12	Check Elearning		
Week 13	36	Nov 14	From DNA to Protein	15	Quiz 7 Lectures 33 - 35
	37	Nov 16	From DNA to Protein	15	
	38	Nov 18	From DNA to Protein	15	
		Assignments due Nov 19	Check Elearning		
Week 14		Nov 21 – Nov 25	Fall Break & Thanksgiving Holidays		
Week 15	39	Nov 28	From DNA to Protein	15	
	40	Nov 30	Regulation of Gene Expression	16	
	41	Dec 2	Regulation of Gene expression	16	
		Assignments due Dec 3	Check Elearning		
Week 16	42	Dec 5	Biotechniques/Development of Evolutionary thinking		Quiz 8 Lectures 36 - 41
	43	Dec 7	Biotechniques/Development of Evolutionary thinking		
		TBD	EXAM 4		Lectures 33 - 43

Grading Policy

There will be three tests given in BIOL 2311. The different tests and their weighted scores are listed below on this page. 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.

If you have questions about the grading or your performance in an exam, please see the instructors as soon as possible. **The final course grade will be based NOT on these individual letter grades, but on the total of the numeric scores of all three exams and the homework/quizzes. Exact grade cutoff will be determined based on grouping of total numerical grades. + and – will be assigned within each letter grade to further distinguish subgroups.**

Students are assessed based on: (see rubric below)

1. TESTS
2. Learn it Assignments
3. Apply it and Case study assignments
4. Quizzes

GRADING RUBRIC:

Your numerical grade will be calculated as follows:

	Total #	points for each	Dropped	Maximum possible points	% of final grade
Lecture Exams	4	50 or greater	0	150 or greater	80% (weighted)
Quizzes	8	10 or greater	1	70 or greater	7.5% (weighted)
Learn it	10 or less	varied	None	Varied and graded	5% (weighted)
Apply it and Case Studies	10 or greater	varied	None	Varied and graded	7.5% (weighted)
			TOTAL	Total points	100% (weighted)

Although letter grades may be provided after the midterm, 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 letter grades, but on the weighted scores of exams, quizzes, and assessments (see rubric above). **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 assignments/quizzes. Exact grade cutoff will be determined based on grouping of total numerical grades. + and – will be assigned within each letter grade to further distinguish subgroups**

The midterm and final grades assigned to the lecture section of the course (BIOL 2311) will be assigned to your workshop course (BIOL 2111-) as well.

LETTER GRADES:

This will be determined by the instructor at the end of the course. Midterm grading scale will be posted and may be different from final grading scale.

Quizzes:

1. There are 8 quizzes in this class. Your lowest quiz will be dropped.
2. Each QUIZ is worth 10 points or more with bonus.
3. QUIZZES are a combination of multiple choice, T/F, fill-in the blank, short answers, and mix-and-match style questions.
4. You have **10 minutes** to complete the quiz
5. Quizzes will be taken online during class time.
6. Quizzes will be available for 20 minutes from 11:35 – 11:55 PM
7. Quizzes are closed book – no resources are allowed.

MindTap ASSIGNMENTS:

Assignment details will be posted on Elearning. All these assignments (pre (**Learn it**), post (**Apply It**) and other (**case studies**)) together will account for 12.5% of your final grade. Assessments will not be accepted past the due date. Due date extension will be given under extenuating circumstances, at the discretion of the instructor. 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.

LEARN IT:

1. These assignments may be assigned every week.
2. These assignments may be set up for grading.
3. These assignments may be time and may be set up for multiple attempts. When multiple attempts are allowed, the best score will be used.
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 – in the assignments tab.

USE THESE LINKS TO ACCESS AND COMPLETE YOUR LEARN IT ASSESSMENT.

APPLY IT and CASE STUDIES:

These are assessments after the Chapter is discussed in lecture

1. *These may be assigned every week.*
2. *These are graded assignments only.*
3. ***Some of these assignments*** may be set up for ***more than one attempt*** and the best score will be recorded.
4. *Case study assignments that are included will follow the same rules as mentioned in 2 and 3.*
5. *The assessment links can be found on the Elearning course page – in the assignments tab.*
PLEASE ONLY USE THESE LINKS TO DO YOUR ASSESSMENTS.
6. *These assessments may be timed.*
7. *If you incur technical difficulties, please email me the day before the assignment is due.*

NOTE - Once you have completed these assignments, it will populate in your gradebook automatically. Please note that if you log into MindTap/Cengage and do your assessment, your grade might not effectively transfer over to Elearning.

Only assignments with links on Elearning will be counted towards your final grade. So please complete these assignments using the links on ELERANING. And the extra assignments available on MindTap may be used for practice.

EXAMS:

1. *There are four exams in this course.*
2. *All four EXAMS are required.*
3. *EXAM DATES are shown in the syllabus.*
4. *EXAM 4 (Date -TBD) is not cumulative.*
5. *All EXAMS will cover chapters taught in prior lectures.*
6. *EXAMS may be a mixture of multiple choice, T/F, Fill-in the blanks, mix and match, and a few free response questions.*
7. *Once the exam is graded, you may approach the instructor during office hours to go over your free-response portion of the exam. The MCQ portion of the exam will not be discussed during these hours.*
8. ***NO EXAM GRADE WILL BE DROPPED FROM THE FINAL GRADE CALCULATION***
9. ***EXAMS are made available for a small window of time – 75 minutes. This window will start at 11AM on the day of the exam and be available till 12:15 PM on the same day (i.e., that is fifteen minutes past noon) Alternate exam windows are not available unless it is a medical excuse with a doctor's note.***
10. *On the day of the EXAM, there are no face-to-face lectures.*
11. ***EXAMS are closed book. No outside resources are allowed.***

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. You must request a make-up within a 2-day window of the original exam day. Also, please remember to provide a copy of the doctor's note, so that the make-up can be scheduled.

EXAM VIEWING OFFICE HOURS

*Instructor will send announcements on eLearning about office hours for discussing exams after they have been graded. Please be sure to come and visit the instructor virtually during office hours. No grade changes will be made **three weeks after the date of the exam.***

EXTRA CREDIT AND SPECIAL ASSIGNMENTS: *This course has no extra credit or special assignment options.*

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.

EMAIL USE

The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's U.T. Dallas email address and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individual corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel. The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.

WITHDRAWAL FROM CLASS

The administration of this institution has set deadlines for withdrawal of any college-level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, I cannot drop or withdraw any student. You must do the proper paperwork to ensure that you will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.

DISABILITY SERVICES

The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located in room 1.610 in the Student Union. Office hours are Monday and Thursday, 8:30 a.m. to 6:30 p.m.; Tuesday and Wednesday, 8:30 a.m. to 7:30 p.m.; and Friday, 8:30 a.m. to 5:30 p.m.

*The contact information for the Office of Disability Services is:
The University of Texas at Dallas, SU 22
PO Box 830688*

Richardson, Texas 75083-0688
(972) 883-2098 (voice or TTY)

Essentially, the law requires that colleges and universities make those reasonable adjustments necessary to eliminate discrimination on the basis of disability. For example, it may be necessary to remove classroom prohibitions against tape recorders or animals (in the case of dog guides) for students who are blind. Occasionally an assignment requirement may be substituted (for example, a research paper versus an oral presentation for a student who is hearing impaired). Classes enrolled students with mobility impairments may have to be rescheduled in accessible facilities. The college or university may need to provide special services such as registration, note-taking, or mobility assistance.

It is the student's responsibility to notify his or her professors of the need for such an accommodation. Disability Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.

OFF-CAMPUS INSTRUCTION AND COURSE ACTIVITIES

Off-campus, out-of-state, and foreign instruction and activities are subject to state law and University policies and procedures regarding travel and risk-related activities. Information regarding these rules and regulations may be found at http://www.utdallas.edu/BusinessAffairs/Travel_Risk_Activities.htm. Additional information is available from the office of the school dean.

Supplemental Instruction (SI) is offered for this course. SI sessions are free group study opportunities, scheduled twice every week. These sessions are facilitated by an SI Leader, who has taken the course recently and has achieved a high final grade. Our SI leader, **TIMOTHY ARCHER**, will be introduced during lecture.

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/>