

BIO 1330 - FUNCTIONAL BIOLOGY

COURSE AND INSTRUCTOR INFORMATION:

Time: Tue, Thurs 2:00-3:20 PM

Location: ASBS #315

Instructor: Dr. Shannon E. Weigum

Email: sweigum@txstate.edu

Phone: (512) 245-1774

Office: SUPPLE #142

Office hours: Tue, Thurs 12:30-1:30 PM, or by appointment

Appointments must be scheduled and confirmed at least 24 hrs. in advance via email.

Required Textbook: BIOLOGICAL SCIENCE, 5th Edition by Scott Freeman with access to Mastering Biology online content

Biology Majors who will be taking both BIO1330/1331

Option #1: Purchase Biological Science 5th edition textbook in loose leaf format with MasteringBiology® from university/local bookstore (includes online access code to MasteringBiology® and etext which will get you through BIO1330 and 1331)

ISBN: 9780321862150

\$110.00

Option #2: Purchase MasteringBiology® with digital eText online (will also get you through BIO1330 and 1331, but with no print version)

<http://www.pearsonmylabandmastering.com/northamerica/masteringbiology/students/titles-available/title.php?isbn=9780321743671>

\$110.00

Nursing Majors who will be taking BIO1330 only

Option #1: Purchase *custom version* of Biological Science, 5th ed. in loose leaf format with MasteringBiology® from university/local bookstore (contains chapters 1-21 in print with online access code to MasteringBiology® which will get you through BIO1330 only)

ISBN: 9781269349536

\$78.00



CAUTION: If you rent or purchase a used book with a MasteringBiology® access code, the access code may have been redeemed previously and you may have to purchase a new access code. Access codes that are purchased from sellers other than Pearson carry a higher risk of being either the wrong ISBN or a previously redeemed code. Check with the seller prior to purchase and proceed at your own risk.

COURSE DESCRIPTION AND OBJECTIVES:

BIO1330 provides the science major with a strong foundation for understanding the complex biochemical, molecular and cellular processes which sustain life. Particular emphasis is placed on biological function at the cellular and molecular level covering topics such as the structure and regulation of genes, as well as, the structure and synthesis of proteins, how these molecules are integrated into cells, and how these cells are integrated into multicellular systems and organisms.

After completion of BIO1330, a student should be able to demonstrate understanding of the principles that sustain life at the molecular and cellular levels.

A student successfully completing Biology 1330 is expected to have an improved ability to think critically, communicate, and make informed decisions about scientific issues.

Academic calendar and important withdraw/drop deadlines available at:
<http://www.registrar.txstate.edu/persistent-links/academic-calendar.html>

LECTURE SCHEDULE:

Date	Lecture Topic	Textbook Chapter
Aug. 26	Introduction to the course, Introduction to biology	1 (all sections)
Aug. 28	Water and carbon: the chemical basis for life	2 (all sections)
Sept. 2	Protein structure and function	3 (all sections)
*Sept. 4	Intro to enzymes	8.3, 8.4
Sept. 9	Nucleic acids	4.1, 4.2, 4.3
Sept. 11	Carbohydrates and Lipids	5 (all sections); 6.1
Sept. 16	Cell Membranes and transport	6.2, 6.3, 6.4
Sept. 18	Mid-term exam 1	
Sept. 23	Cell structure function	7.1, 7.2, 7.3
Sept. 25	Cell Systems: nuclear transport, endomembrane, and structure of the cytoskeleton	7.4, 7.5, 7.6
Sept. 30	Energy and enzymes, Intro to metabolism	8 (all sections)
*Oct. 2	Cellular Respiration	9 (all sections)
Oct. 7	Cellular Respiration (continued), Photosynthesis	10 (all sections)
Oct. 9	Photosynthesis (continued)	
Oct. 14	Cell-to-cell interactions and signaling	11 (all sections)
Oct. 16	Mid-term exam 2	
Oct. 21	Mitosis, cell cycle regulation and cancer	12.1, 12.2, 12.3, 12.4
Oct. 23	Meiosis and genetic variation	13.1, 13.2
Oct. 28	Meiosis (contd.)	13.3, 13.4
*Oct. 30	DNA and the gene: synthesis and repair	14.4, 15.3, 15.4, 15.5
Nov. 4	How genes work	16.2, 16.3, 16.4
Nov. 6	Transcription and translation	17 (all sections)
Nov. 11	Transcription and translation (contd.)	
Nov. 13	Mid-term exam 3	
Nov. 18	Control of gene expression in bacteria	18.1, 18.3, 18.4
Nov. 20	Control of gene expression in eukaryotes	19 (all sections)
*Nov. 25	Control of gene expression in eukaryotes (contd.)	

Nov. 27	THANKSGIVING HOLIDAY	
Dec. 2	Analyzing and engineering genes (overview only)	20.1, 20.2, 20.5, 20.6
Dec. 4	Genomics	21 (all sections)
Dec. 9 2-4:30pm	Comprehensive Final Exam	

* **Dates for online quizzes**

COURSE POLICIES: (PLEASE READ COMPLETELY AND VERY CAREFULLY)

It is your responsibility to read the recommended book chapters and outlines before/after the lecture. It will definitely make learning easier if you arrive prepared.

GRADING:

All exams will be in multiple-choice format. The final exam will be comprehensive. **There are no make-up exams.** If you miss an exam with an excused absence, then your grade on the final exam will be supplemented for the missed exam.

Exam results may be reviewed by the student during the instructor's office hours *up to one month* following the exam date.

The final grade will be calculated as follows:

Exam 1	100
Exam 2	100
Exam 3	100
Comprehensive final exam	200
Quizzes	100
.....	
SubTotal:	600
Extra Credit	+40 (optional)
.....	
Total	$640/600 \times 100 = \text{your grade } (\%)$

Grading scale:	90 and above	A
	80 - 89.9	B
	70 - 79.9	C
	60 - 69.9	D
	59.9 and below	F

You should be able to calculate your grade using this information. *Please do not email me asking me to calculate it for you. I will not reply to such emails.*

QUIZZES:

Four (4) quizzes will be given online throughout the semester, using mastering biology online supplement. Please note that **1/6th** of your final grade will be determined by the points earned from these quizzes. They are important!

Quizzes are available on the designated days starting at 8AM until 11:59PM. You must complete the quiz during this time period, no exceptions. For quizzes 1&2 an adaptive learning assignment is available and, if completed within 1 week of the original quiz deadline, you can earn up to 5 points onto the quiz grade. If you received a 95% or better on the quiz you are exempt from this follow-up assignment and will automatically receive the additional 5 points.

EXTRA CREDIT POINTS:

You can earn extra credit points by completing the online tutorial/review modules assigned via Mastering Biology prior to each exam. **The extra credit points WILL BE ADDED TO YOUR POINT TOTAL OVERALL; however, you may consider this as an "earned curve" for the individual exams that provides you a double-benefit by helping you to study for each exam.**

ACADEMIC DISHONESTY AND PLAGIARISM:

Your actions during exams will be closely monitored by proctors. Keep your eyes on your exam paper only. All cases of academic dishonesty or violation of the university honor code will be dealt with according to published university policies ([UPPS 7.10.01](#)).

ATTENDANCE:

Attending the lectures is your responsibility. Please arrive on time for lectures and stay the whole time. Late arrivals and early departures are very disruptive to everybody.

PROPER BEHAVIOR IN CLASS:

WHEN YOU ARE IN CLASS I EXPECT YOU TO PAY ATTENTION TO THE LECTURE. DO NOT TALK, OR BEHAVE IN A WAY THAT DISRUPTS OTHER STUDENTS. DO NOT BRING OTHER HOMEWORK TO DO IN MY CLASS. THERE WILL NOT BE ANY CREDIT FOR ATTENDANCE, SO PLEASE COME TO THE CLASS **ONLY** IF YOU REALLY WANT TO LISTEN TO THE LECTURE AND ENGAGE IN CLASS DISCUSSIONS.

EMAIL CORRESPONDENCE:

You will be required to have, and check your Texas State email regularly for updates and important messages regarding the course. **I will only correspond with students via 'txstate.edu' email address. Questions with clear answers found on the SYLLABUS will not receive a response!**

DROP/WITHDRAWAL POLICY:

The University deadline to drop a course with an automatic 'W' grade is **October 24th at 5PM**. If you have to withdraw from this class after that day, you will be assigned a 'W' or 'F' grade depending on your status on the day of withdrawal.

SUPPLEMENTAL INSTRUCTION:

Supplemental Instruction (SI) is a nontraditional form of tutoring provided by SLAC and the Department of Biology that focuses on collaboration, group study, and interaction for assisting students in undertaking "traditionally difficult" courses. SI provides a trained peer who has successfully negotiated the course to assist current students. This peer, called the SI Leader, attends a section of the course, participates as any normal student (takes notes, exams, etc.), and then facilitates 3 one-hour study sessions per week for group study. SI Leaders are trained to help students improve their study skills and model the types of behaviors that make students successful. On average, students participating regularly in SI sessions score **one-half to one whole letter grade better than students choose not to participate**. For more in-depth information regarding Supplemental Instruction, including an up to date session schedule, please visit www.txstate.edu/slac.

If you have questions or concerns regarding the SI program, please contact Ms. Lindley Alyea lindley@txstate.edu, NOT your instructor. However, please understand that **SI Leaders do not have administrative authority** in this class and that attending session is not in any way a substitute for attending lecture!

Texas State University-San Marcos Honor Code

As members of a community dedicated to learning, inquiry, and creation, the students, faculty, and administration of our University live by the principles in this Honor Code. These principles require all members of this community to be conscientious, respectful, and honest.

We Are Conscientious:

We complete our work on time and make every effort to do it right. We come to class and meetings prepared and are willing to demonstrate it. We hold ourselves to doing what is required, embrace rigor, and shun mediocrity special requests, and excuses.

We Are Respectful:

We act civilly toward one another, and we cooperate with each other. We will strive to create an environment in which people respect and listen to one another, speaking when appropriate, and permitting other people to participate and express their views.

We Are Honest:

We do our own work and are honest with one another in all matters. We understand how various acts of dishonesty, like plagiarizing, falsifying data, and giving or receiving assistance to which one is not entitled, conflict as much with academic achievement as with the values of honesty and integrity.

The Pledge for Students

Students at our University recognize that, to insure honest conduct, more is needed than an expectation of academic honesty, and we therefore adopt the practice of affixing the following pledge of honesty to the work we submit for evaluation:

I pledge to uphold the principles of honesty and responsibility at our University.

The Pledge for Faculty and Administration

Faculty at our University recognize that the students have rights when accused of academic dishonesty and will inform the accused of their rights of appeal laid out in the student handbook and inform them of the process that will take place.

I recognize students' rights and pledge to uphold the principles of honesty and responsibility at our University.

Texas State Endorses Wingspread Journal's Seven Principles for Good Practice in Undergraduate Education

1. Student-faculty contact
2. Cooperation among students
3. Active learning
4. Prompt feedback
5. Time on task
6. High expectations, and
7. Respect for diverse talents and ways of learning