

BIO 1050 - An Introduction to Life
Course Syllabus section 001/002
Winter 2021

Instructor: Robert A Thomas, Ph.D.

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CLASS MEETING LOCATION

CANVAS Online Synchronous

CLASS MEETING TIME

Monday, Wednesday, Friday 2:30 – 3:20 P.M.

COURSE DESCRIPTION AND OBJECTIVES

A factual and conceptual treatment of modern biology at the cell, organismal, and population levels of organization.

Starting with basic concepts of biology, we will advance to understanding more complex topics relevant to modern society. The objective is to provide both science and non-science major students with a broad-based and fundamental understanding of the basic biology relating to biodiversity, relationships that exist between all life forms from the prokaryotic microorganisms, to eukaryotic plant and animal systems. In conclusion you will be able to understand the impact that ecosystems have on the diversity of life forms on the planet.

Students will be able describe:

1. How **science is based on evidence** and makes predictions and interpret biological data **qualitatively, quantitatively, and with graphs.**
2. How **structures** of molecules, cells and tissues relate to their **functions**
3. How **information** flows in cells, from DNA to RNA to proteins, and in the mitotic and meiotic cell cycles.
4. How **energy and matter are transformed** in cellular respiration and photosynthesis.
5. How the components of cells interact as **systems** to generate emergent properties
6. How biological information can be **modified by mutations** and **biotechnology.**
7. How inheritance and mutations are critical for **evolution.**
8. How **microorganisms** impact on **technology** and **health.**
9. How science informs the decisions of a **society**, and how science, such as biological engineering, creates opportunities that require informed citizens and policies.

Course assignments will illustrate the impact that human populations can have on altering biosystems that we share with other organisms. Following this course it is expected that students will have an increase in understanding of what Biology is, and a greater appreciation of how their personal, political, ethical choices can have an enormous global impact.

COURSE PREREQUISITES

There are no prerequisites for this course. This course is designed for both science and non-science majors.

OFFICE HOURS

As needed office hours will be scheduled after class to individuals who request a Zoom meeting. A mutually convenient appointment at other times or by email at: a1467@wayne.edu In addition, you may e-mail **Dr. Thomas** questions or comments. Depending on the load, responses are usually provided within a day or two.

Textbook: CAMPBELL Biology: Concepts & Connections (Tenth Online Edition, with the giraffe on the cover pub. Pearson) by Taylor, Simon, Dickey, Hogan, and Reece **Access to the textbook (any format) is required for success in this course.** Copies of the textbook are available in the STEM Commons and on reserve in the undergraduate library (ask at the front desk). Digital materials and **Mastering Biology** that come with the eBook and are **essential to do quiz assignments.**

RESOURCES FOR SUCCESS

Canvas: Our course Canvas site (canvas.wayne.edu) includes the syllabus, FAQs, announcements, study tools, study guides team areas, lecture slides and recordings, and a Discussions area. Check Canvas once every business day of the semester. **You will need internet access to keep up in class.** If your home access is not good, you will need to plan time on campus to use the computers in the library, or somewhere else with internet access.

Chapter Reviews: At the end of the Chapters in the book there are Review sections that highlight the key concepts and test your comprehension of the material covered from the chapter. Answers and explanations are given in the Appendix 4 section of the book. It is possible that you will see questions on the exams directly related to this material, so **I would strongly suggests** that you carefully go over this section at the end of the Chapters.

Canvas Discussions: For questions that might also benefit other students, please post to Discussions in Canvas, so everyone can help each other and see the answers. You will get information faster this way because an answer your question may already be posted, and classmates may answer faster than I can.

Lecture Recordings: The lectures usually will be recorded and posted in Canvas under **Zoom Recordings**. You also are welcome to record lectures for your personal use. Audio or video recordings or pictures are to be used only for the student's personal instructional use. Such recordings are not intended for a wider public audience, such as postings to the internet or sharing with others. If you take pictures, please disable your flash because flashes are very distracting. **NOTE Every effort will be made to provide the lecture slides on Canvas sometime before the class meets. I recommend that you look over slides, and print handouts to follow up with the lecture.**

Technical Support: I can help with course-specific Canvas problems (on the Discussions board), but not system issues. If you have problems with Zoom or Respondus

Lockdown browser, the Canvas system or email, please contact Computing & Information Technology (C&IT) at (313) 577-4778 or helpdesk@wayne.edu.

Office Hours: Office hours are a good time get help with your questions on the material from the course or issues that require discussion or are specific to you, such as concerns about the course, study strategies, grade problems, special needs or career issues.

Sometimes students also need to talk to me individually for paperwork or private issues, **I will offer short individual appointments scheduled on request.** You will request an appointment through a link on Zoom during class with your access I (example aa1467) The idea is that if one student wants an appointment at a certain time, others may want to meet too, so you will be in the waiting room on Zoom until I admit your access (Depending on the number of request you may need to be patient). This will allow us to set up and have appointments efficiently with the most flexibility for students' busy schedules.

Email: Email works for questions that do **not** require interactive discussion and are not appropriate to post to the whole class on the Discussions board. For example, if you will miss class because you are a student athlete, are part of another WSU program, have a court date, or have jury duty, please email me the dates involved and documentation. Include whether the dates include an exam or not.

WAYNE STATE UNIVERSITY SUPPORT

Academic Success Center: Get free individual **tutoring** and group **workshops** in the Academic Success Center. You can also make a free appointment with a learning specialist to design study strategies just for you. See success.wayne.edu/ for more.

Multicultural Student Engagement (OMSE) omse.wayne.edu. Rm 799, Student Center

Counseling and Psychological Services (CAPS) It is quite common for college students to experience mental health challenges, such as stress, anxiety and depression, that interfere with academic performance and negatively impact daily life. Help is available for any currently enrolled WSU student who is struggling with a mental health difficulty caps.wayne.edu Rm 522 Student Center 313 577-3398. See the FAQs for additional tips on managing anxiety.

COURSE STRUCTURE

EXAMS:

There will be (4) 50 minute midterm lecture exams each worth **120 points (40 questions)**, and a Final Exam comprehensive, worth **120 points (40 questions)** consisting of a mix of True/False, and Multiple choice questions. It is strongly recommended that you **DO NOT** miss a lecture exam. I will show you how to calculate your grade to determine your standing in the class at all times. **If at any time you drop below 70% (C-) average, please make a point to come and see me to discuss your progress in the class.**

For your FINAL GRADE the lowest of the four unit exam scores is automatically dropped to accommodate personal reasons that may arise to miss an exam. You do not need to explain or submit an excuse. I assume if you miss an exam you have a good reason. **There are no alternative dates or times to take or make-up unit exams.**

Unit exams are during lecture as indicated in the schedule at the end of the syllabus. Rules and procedures for exams will be explained before exams and must be followed for all exams.

Sample Exam Questions: To help you prepare for the upcoming exams I will provide you with weekly quizzes and Mylab /Mastering assignments to reinforce the content of the lecture for the week. This will give you an idea of the type of questions and topics to expect on the actual exam. I will post these on the Fridays to be due the following Sunday at midnight. It is strongly advised that you do the assignments preceding the actual exams. Along with the exams, I will also post a separate answer key to confirm your answers. The recommended use of the quizzes to initially answer as a close book exam (to test your knowledge), then use your text book to look up the answers, and finally check the answer keys to confirm your answers. Many of my previous students have found this approach very useful before taking my actual exams.

EXAM DATES

EXAM I - Friday, January 29, 2021

EXAM II - Friday, February 26, 2021

EXAM III - Friday, March 26, 2021

EXAM IV - Monday, April 26, 2021

FINAL/Makeup Exam – Wednesday April 28, 2021

The **Final Exam will be held on Wednesday April 28th Section 005 at 10:15 – 12:15 or Sections 001/002 at 2:45 – 4:45 PM!** NOTE THAT THE ROOM IN WHICH THE FINAL EXAM WILL BE HELD IN IS THE SAME AS THE REGULAR CLASS ROOM. The final exam is scheduled as designated in the Schedule of Classes for this term (https://wayne.edu/registrar/scheduling/final_exam_schedule_winter_2020.pdf). No other time for the final exam will be available, and no exceptions will be made for conflicts such as student travel plans.



Final Exam Schedule Winter 2021

Final Exam Time	Final Exam Date					
	Wednesday, April 28	Thursday, April 29	Friday, April 30	Saturday, May 1	Monday, May 3	Tuesday, May 4
8:00-10:00 a.m.	Classes that start Monday at 8:30 a.m.	Classes that start Tuesday at 8:30 a.m.	Common Finals: MAT 0900, 0993, 1050, STA 1020	All Saturday classes will hold their final exams during regular meeting period.	Classes that start Monday at 9:30 or 10 a.m.	Classes that start Tuesday at 9:30 or 10 a.m.
10:15-12:15 p.m.	Classes that start Monday at 10:30 a.m.	Classes that start Tuesday at 10:30 a.m.	Common Finals: MAT 1000, 1800, 2010		Classes that start Monday at 11:30 a.m.	Classes that start Tuesday at 11:30 a.m.
12:30-2:30 p.m.	Classes that start Monday at 12:30 or 1:00 p.m.	Classes that start Tuesday at 12:30 or 1:00 p.m.	Common Finals: SPA 1010, 1020, 1060, 2010, GER 1010, 1020, 2010, FRE 1010, 1020, 1060, 2010, ITA 1010		Classes that start Monday at 1:30 p.m.	Classes that start Tuesday at 1:30 p.m.
2:45-4:45 p.m.	Classes that start Monday at 2:30 p.m.	Classes that start Tuesday at 2:30 p.m.	Common Finals: PHY 2130, 2140		Classes that start Monday at 3:30 p.m., 4 or 4:30 p.m.	Classes that start Tuesday at 3:30 p.m., 4 or 4:30 p.m.
6:00-9:00 p.m.		Common Finals: FIN 3290				

EXAM FORMATS

The exams may include questions that are True/False and Multiple choice. All exams will be closed book. No electronic devices of any kind will be allowed unless indicated otherwise in advance, and cell phones and pagers must be turned off.

There will be four **50 minute** lecture exams. Each exam will be worth 120 points. If you miss an exam, there will be a **comprehensive make up exam** at the end of the term. You can only substitute this exam for one missed or your lowest exam. All other missed exams will be counted as a zero.

GRADING LECTURE ONLY STUDENTS

Your final grade for this class is based on total points earned. The course will have a total of 480 points for the semester.

Grades:	Unit Exams 1-4 (120 points each)	480 points
	Drop one lowest unit exam	-120
	<u>Final exam</u>	<u>120</u>
	Total	480 points

GRADING LAB & LECTURE STUDENTS

For those students also taking the lab along with the lecture, your lab score will be added to your 4 highest midterm scores and the total will be divided by 730 (250lab max + 480 lecture max) to determine your final grade

Grading Policy: Grades will be calculated on the following scale:

A	92.5-100%	B	82.5-87.4%	C	72.5-77.4%	D	62.5-67.4%
A-	90.0-92.4%	B-	80.0-82.4%	C-	70.0-72.4%	D-	60.0-62.4%
B+	87.5-89.9%	C+	77.5-79.9%	D+	67.5-69.9%	F	0-59.9%

Class participation and attendance are strongly encouraged but will not be graded.

There is no extra credit under any circumstances. Exam grades will be posted on Canvas by your Student ID number as soon as possible after the exam has been administered.

Individual lecture exams will not be curved. Overall course scores may or may not be curved. Course grades will be determined from total point accumulation at the end of the semester.

Students with scheduling conflicts (medical, legal, religious, jury duty, etc.) for any exam must notify Dr. Thomas in writing by class time at least **two weeks before the scheduled exam**. No make-up exams will be given unless he is notified in writing by this date. Reasonable exceptions will be granted in cases of illness that will require notification prior to the exam and must be followed up with an original signed note from source.

EXAM GRADE DISPUTES / CHALLENGE OPTION

Students will have one (1) week after the return of an exam or a written assignment to challenge a grade for any question. Failure to challenge the grade within this period indicates a willingness to accept the grade as is. The challenge should consist of a written description of why the answer is correct based on other published material that you cite. It is not an opportunity to complain.

CHEATING

A strict zero-tolerance policy for cheating will be enforced. Anyone caught cheating on an exam will receive a score of 0 (zero) for that portion of the grade, and be reported to the University Dean of Students Office Student Judicial Services (<http://www3.clas.wayne.edu/Multimedia/CRJ/files/CheatingWebverisonupdatedMay2009b.pdf>), which will go on your permanent record. Students found to be cheating during an exam (using a “cheat sheet”, looking at another’s paper, or allowing another to look at yours), will receive a zero for that test with no opportunity to drop or replace that score. A second episode of cheating will result in a grade of F for the course and may also result in initiation of university disciplinary action.

Professional behavior is expected during online lectures, which includes respecting your classmates by arriving on time, **turning off cell phones and not talking**, not eating or drinking during class. All students must show respect in language and attitude towards the instructors and their fellow students. You are encouraged to discuss differences of opinion with each other, respectfully, but not during lecture, as this would be distracting to your fellow students and to the instructor as well.

POSTING OF EXAM GRADES

Scored exam grades will be posted on Canvas by Student ID Number as soon as possible after the exam has been administered. The distribution of scores will also be provided in class.

SPECIAL CONSIDERATIONS FOR INDIVIDUALS WITH DISABILITIES

If you have a physical or mental impairment that may interfere with your ability to complete the requirements for this course successfully, you are invited to contact Educational Accessibility Services (1600 David Adamany Library; 577-1851) to discuss appropriate accommodations on a confidential basis.

RELIGIOUS HOLIDAY CONFLICTS

If you have a conflict with any of the scheduled class or exam times due to religious reasons, you must notify Dr. Thomas in writing by class time on by class time **two weeks before the scheduled exam**. No make-up exams will be given unless s/he is notified in writing by this date.

ADD/DROP POLICY

Add and Drop forms will not be signed after, the second week of class, Friday January 17. Drop forms must be submitted to the Registrar before the end of Friday January 17 to get tuition cancellation. Wayne State has changed the grading policy. There are no more "X" grades. If you sign up for a class, stop attending, and fail to withdraw, you will receive an F for the course. In addition, if you drop the course after 5 weeks, you will be assigned one of the following three marks: WP (withdrew but was passing at the time), WF (withdrew but was failing at the time), WN (withdrew and never attended class or no graded work). Also, any "I" given to a student will automatically revert to "F" if the work is not completed within one calendar year. There are no exceptions. Further information on the grading policy can be found at <https://reg.wayne.edu/students/policies>.

UNEXPECTED UNIVERSITY CLOSURES.

If the University is officially closed on an exam day, the exam will be held on the next regularly scheduled class day. Closure of the University is announced by the following mechanisms:

1. the University Newsline (313) 577-5345 *
2. WSU Homepage (www.wayne.edu) *
3. WSU Pipeline (www.pipeline.wayne.edu) *
4. WDET-FM (Public Radio 101.9)
5. by other local radio and television stations

* Note: The information on closures and class cancellations is likely to be found at these locations before it is broadcast by local radio and television stations

BIO 1050 Winter 2021 Syllabus Lecture Schedule and Exams * - THOMAS				
CLASS	DATES	Quiz	LECTURE TOPICS	CHAPTER
1	Monday, January 11, 2021		Orientation / Housekeeping	0
2	Wednesday, January 13, 2021		Biology: The Scientific Study of Life	1
3	Friday, January 15, 2021	Quiz 1		
4	Monday, January 18, 2021			
5	Wednesday, January 20, 2021	Quiz 2	The Chemical Basis of Life	2
6	Friday, January 22, 2021	NO CLASS - MLK BIRTHDAY		
7	Monday, January 25, 2021		The Molecules of Cells	3
8	Wednesday, January 27, 2021	Quiz 3		
9	Friday, January 29, 2021	EXAM I		
10	Monday, February 01, 2021		A Tour of the Cell / Microbial Life: Prokaryotes	4
11	Wednesday, February 03, 2021	Quiz 4		
12	Friday, February 05, 2021		The Working Cell	5
13	Monday, February 08, 2021	Quiz 5		
14	Wednesday, February 10, 2021		How Cells Harvest Chemical Energy	6
15	Friday, February 12, 2021	Quiz 6		
16	Monday, February 15, 2021		Photosynthesis: Using Light to Make Food	7
17	Wednesday, February 17, 2021	Quiz 7		
18	Friday, February 19, 2021		The Cellular Basis of Reproduction and Inheritance	8
19	Monday, February 22, 2021	Quiz 8		
20	Wednesday, February 24, 2021		TBA	
21	Friday, February 26, 2021	EXAM II		
22	Monday, March 01, 2021		Patterns of Inheritance	9
23	Wednesday, March 03, 2021	Quiz 9		
24	Friday, March 05, 2021		Molecular Biology of the Gene	10
25	Monday, March 08, 2021	Quiz 10		
26	Wednesday, March 10, 2021		How Genes Are Controlled	11
27	Friday, March 12, 2021	Quiz 11		
28	Monday, March 15, 2021	NO CLASS - SPRING BREAK		
29	Wednesday, March 17, 2021			
30	Friday, March 19, 2021			
31	Monday, March 22, 2021	Quiz 11	How Genes Are Controlled (cont)	11
32	Wednesday, March 24, 2021		TBA	
33	Friday, March 26, 2021	EXAM III		
34	Monday, March 29, 2021		DNA Technology and Genomics	12
35	Wednesday, March 31, 2021	Quiz 12		
36	Friday, April 02, 2021		The Immune System	24
37	Monday, April 05, 2021	Quiz 13		
38	Wednesday, April 07, 2021		Unifying Concepts of Animal Structure and Function	20
39	Friday, April 09, 2021			
40	Monday, April 12, 2021	Quiz 14		
41	Wednesday, April 14, 2021		The Biosphere: An Introduction to Earth's Diverse Environments	34
42	Friday, April 16, 2021			
43	Monday, April 19, 2021	Quiz 15		
44	Wednesday, April 21, 2021		TBA	TBA
45	Friday, April 23, 2021	REVIEW		
46	Monday, April 26, 2021	EXAM IV		
47	Wednesday, April 28, 2021		FINAL EXAM BIO 1050 Section 005 @ 10:15 – 12:15 AM BIO 1050 Sections 001/002 @ 2:45 – 4:45 PM	ALL

* - Note that all dates/exams/lectures are tentative and may be subject to change

Final 2020-2021 Academic Year	Winter 2021
Schedule of Classes Online	Mon Oct 12
Priority Registration (First week schedule)	Mon Nov 2 - Sun Jan 3
Open Registration (Add'l \$35 Fee for Initial Registration)	Mon Jan 4 - Sun Jan 10
University Year Appointments Begin/End	Fri May 14
Semester Begins	Fri Jan 1
Classes Begin	Mon Jan 11
Holiday - University Closed	Mon Jan 18
Late Registration (Add'l \$70 for Initial Reg. only), and 1st Week Late Adds	Mon Jan 11 - Mon Jan 18
Late Registration (Add'l \$70 for Initial Reg. only), and 2nd Week late Adds	Tue Jan 19 - Mon Jan 25
Last Day for Tuition Cancellation - Full Term Courses/Census Date	Mon Jan 25
Early Academic Assessment	Wed Jan 27 - Sun Feb 21
Instructor Approval Required to Withdraw from Classes. In Academica: select "Course Withdrawal" from the Registration Menu under Student Resources	Tue Jan 26 - Sun Mar 28
Degree Applications Due	Fri Feb 12
Last Day to Request Course Withdrawal	Sun Mar 28
Holiday - No Classes	Mon Mar 15 - Sat Mar 20 (Spring Break)
Commencement	TBD
Classes End	Mon Apr 26
Study Day - Final Exams May Not Be Scheduled	Tue Apr 27
Final Exams	Wed Apr 28 - Tue May 4
Final Grades Due	Fri May 7
Semester Ends	Tue May 4

IMPORTANT DATES DURING THE WINTER 2021 SEMESTER

This info can be found online at <https://wayne.edu/registrar/registration/calendar19-20>

OTHER

Any specific issue not covered by this syllabus will be resolved using University policies. Disputes that cannot be resolved following the guidelines present in this syllabus will be resolved by following the guidelines of the University "Student Due Process" <https://generalcounsel.wayne.edu/legal/student-code>