

DO NOT LOSE THIS SYLLABUS OR THROW IT AWAY!!!!!!!!!!!!!!
 THIS SYLLABUS IS SUBJECT TO CHANGE AS INSTRUCTOR SEES FIT.

Clicker #: _____

BIOLOGY 105 (BIOL105): INTRODUCTION TO LIFE SCIENCES

MWF 9:30am -10:20pm, McNair Science Building (MSB) room 13

Francis Marion University – FALL SEMESTER 2012



INSTRUCTOR: PAUL ZWIERS (pronounced “zoo-ears”), Ph.D.

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Office phone: (843) 661.1654

Website: people.fmarion.edu/pzwiers/

EMAIL IS BEST! I am not in my office nor check my voicemail regularly.



Dr. Zwiers’ weekly schedule

| | Monday | Tuesday | Wednesday | Thursday | Friday |
|-------|--------------|---------------------------|-------------|--------------|---------------------------|
| 8:30 | Univ. Life | BIO103 | Univ. Life | BIO103 | Available by appointment* |
| 9:00 | 8:30-9:20** | 8:30-9:45 | 8:30-9:20** | 8:30-9:45 | Available by appointment* |
| 9:30 | BIO105 | | BIO105 | | BIO105 |
| 10:00 | 9:30-10:20 | | 9:30-10:20 | Office hours | 9:30-10:20 |
| 10:30 | Office hours | | Unavailable | 10:00-11:30 | Office hours |
| 11:00 | 10:30-11:30 | | | | 10:30-11:30 |
| 11:30 | Unavailable | Available by appointment* | | Unavailable | Unavailable |
| 12:00 | | | | | |
| 12:30 | | | BIO115 | | |
| 1:00 | | | 11:30-2:20 | | |
| 1:30 | | | | BIO115 | |
| 2:00 | Unavailable | | | 12:45-3:35 | Unavailable |
| 2:30 | | | | | |
| 3:00 | | Unavailable | Unavailable | | |
| 3:30 | | | | Science | |
| 4:00 | | | | Symposium | |
| 4:30 | | | | 3:45-5:00 | |

Office hours:

set hours
 Mon 10:30 – 11:30
 Thur 10:00 – 11:30
 Fri 10:30 – 11:30

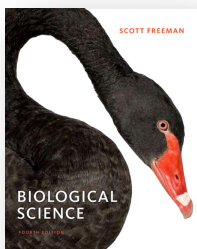
by appointment*
 Tues 10:00 – 2:30
 Fri 8:30 – 9:30
 Mon and Wed
 8:30-9:30**

*Availability by appointment may change, set up appointments 24 hours in advance via EMAIL.

**Starting October 29, Univ. Life will change to “Available by appointment”.

Previously stated conditions apply.

BIO105 course description: The life sciences are *incredibly* diverse including fields in medicine, molecular genetics, animal behavior, and plant ecology. A degree in biology can therefore lead to a great variety of career opportunities. This course is the first in a two part introductory sequence that lays the framework for all future studies in the life sciences. BIOL105 is designed to cover the scientific method, biological chemistry, and the molecular and cellular basis of life. This course is therefore required of all biology majors, as well as nursing students and those majoring in other sciences.



Textbook: S. Freeman. 2011. *Biological Science, 4th ed.* Pearson: San Francisco. Will also be used for BIOL106. DO NOT sell back if you plan to take BIOL106.

Laboratory Manual: Shannon et al. 2012. *Introduction to Biological Science Laboratory*, Biology 115. Francis Marion University. Only necessary if you are taking the lab.

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Tentative lecture and exam schedule:

| Date | Topic & Assessments | Chapters (pages) | notes |
|----------|---|------------------|----------------------------------|
| Aug. 22 | Syllabus, Intro to class, How to succeed in BIO105 | | |
| Aug. 24 | Biology as a science | 1 | Last day to drop/add |
| Aug. 27 | Atoms, atomic bonds | 2 (15-26) | |
| Aug. 29 | pH, chemical reactions | 2 (27-36) | |
| Aug. 31 | Quiz #1 (ch. 1 & 2); Proteins | 3 (38-51) | |
| Sept. 3 | Labor day | | |
| Sept. 5 | Proteins & Enzymes | 3 (51-56) | |
| Sept. 7 | Nucleic acids | 4 | |
| Sept. 10 | Carbohydrates & Lipids | 5 & 6 (82-89) | |
| Sept. 12 | Cell theory & structure | 7 (102-116) | |
| Sept. 14 | Exam #1 (ch. 1-6 up to page 89) | | Last day to withdraw w/o penalty |
| Sept. 17 | Cell structure | 7 (102-116) | |
| Sept. 19 | Cell membranes | 6 (85-99) | |
| Sept. 21 | Quiz #2 (pg. 85-99, 102-116); Cellular systems | 7 (116-128) | |
| Sept. 24 | Cellular interactions | 8 (131-139) | |
| Sept. 26 | Cell communication | 8 (139-146) | |
| Sept. 28 | Energy | 9 (148-152) | |
| Oct. 1 | Exam #2 (ch. 6-9) | | |
| Oct. 3 | Energy & metabolism | 9 (168-169) | |
| Oct. 5 | Harvesting pathways: cellular respiration | 9 (153-166) | |
| Oct. 8 | Quiz #3 (ch. 9); Fermentation | 9 (166-168), 10 | HALF WAY DONE! (midterm) |
| Oct. 10 | Photosynthesis | 10 (172-184) | |
| Oct. 12 | Photosynthesis | 10 (184-190) | |
| Oct. 15 | DNA review, terminology | 4 & 11 (194-196) | |
| Oct. 17 | Exam #3 (ch. 9-10) | | |
| Oct. 19 | Cell cycle | 11 (196-208) | |
| Oct. 22 | Cell cycle: mitosis | 11 (196-208) | |
| Oct. 24 | Quiz #4 (ch. 4,11,12[pg.211-218]); Sexual reproduction | 12 (211-218) | |
| Oct. 26 | Meiosis | 12 (219-227) | |
| Oct. 29 | DNA replication | 14 | |
| Oct. 31 | Exam #4 (4, 11, 12) | | |
| Nov. 2 | Gene function | 15 | |
| Nov. 5 | Fall break | | |
| Nov. 7 | Transcription & Translation | 16 | |
| Nov. 9 | Quiz #5 (14-16); Gene expression | 17 | |
| Nov. 12 | Gene expression | 18 | |
| Nov. 14 | Mendelian genetics | 13 | |
| Nov. 16 | Exam #5 (ch 14-18) | | Last day to withdraw w/ penalty |
| Nov. 19 | Mendelian genetics | 13 | |
| Nov. 21 | Thanksgiving break | | |
| Nov. 23 | Thanksgiving break | | |
| Nov. 26 | Molecular evolution | 24 | |
| Nov. 28 | Quiz #6 (ch 13, 24); Molecular evolution | 25 | |
| Nov. 30 | Biotechnology | 19 & 20 | |
| Dec. 3 | Exam #6 (ch 13, 19, 20, 24, 25) | | |
| Dec. 4 | Reading day | | |

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Assessment: Points can be earned in multiple ways throughout the semester. Worksheets will be posted on Blackboard and are due before the lecture begins. The worksheet will be a review of material covered in the previous lecture, and an introduction to terms and concepts in the upcoming lecture. Clickers will be utilized in class to answer in-class questions. Points will be awarded for correct answers. A total of six (6) quizzes and six (6) exams will be given throughout the semester. The sixth exam will be on the last day of lecture. A final exam, given during the final exam period, will be cumulative and will focus on general concepts presented during the semester.

| Summary of points: | |
|---|-------------|
| Worksheets | 10% |
| Clicker questions | 10% |
| Quizzes (6) | 20% |
| Semester exams (6) | 50% |
| Final exam- given during final exam period; cumulative | 10% |
| Total | 100% |

| Grading scale: | |
|-----------------------|----|
| 90-100% | A |
| 87-89.9% | B+ |
| 80-86.9% | B |
| 77-79.9% | C+ |
| 70-76.9% | C |
| 67-69.9% | D+ |
| 60-66.9% | D |
| <60% | F |

Students with disabilities: All academic programs are open to enrolled students irrespective of physical or learning disabilities. I am happy to help any student in my class succeed, regardless of disability. Students requiring special accommodations for disabilities should submit documentation and work through the Office of Counseling and Testing (see the *Student Handbook*).

Blackboard: This course will utilize Blackboard, a web-based classroom assistance program. In Blackboard, students can download lectures and view course material. Additionally, students will receive and turn in quizzes through Blackboard. Go to blackboardtest.fmarion.edu and log in using your swampfox account login (minus "@g.fmarion.edu") and password. **DO THIS TODAY!** You should already be registered for this class. If not, PLEASE SEE ME as soon as possible.

Class policies:

Use of clickers- We will be using TurningPoint clickers in this course. These devices allow for immediate feedback on course material as students answer in-lecture questions. Every student will be assigned a clicker, so be sure to ONLY pick up YOUR clicker before class. Students should only have their own clicker. If a student is found with more than one clicker, both students will not receive ANY clicker points for the ENTIRE semester (lose 10% of their final grade). Clickers are to be returned at the end of EVERY class. Students will be responsible for replacing their clicker if it is stolen/lost.

Attendance- The use of clickers allows me to quickly take attendance during every class. Furthermore, if you do not come to class, you will not be able to earn clicker points for that day. If you miss more than six (6) class periods, you may be dropped from the course with either a W or F. If you do miss class, you are responsible for obtaining class notes from a classmate (my lecture notes are unavailable, but I am happy to go over questions you may have on material you missed). Attendance is absolutely required when quizzes and exams are given. Makeup quizzes and exams are only given in EXTREME circumstances, and ONLY if the absence is documented (e.g. doctor's note). You must contact me

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before the next class period, and the makeup MUST be taken within ONE week from the original quiz/exam date. A final can ONLY be made up with approval from the Chair of the Department.

Tardiness- I expect you to be on time, being seated and ready to begin at 9:30. Tardiness is rude and disruptive to your colleagues and the instructor. If you are late you will be unable to receive your clicker, will be recorded as absent, and will not receive clicker points for that day. If rampant tardiness becomes a problem, the classroom door may be locked at 9:30 without warning, and no one admitted thereafter.

Quizzes- Students have the first 10 minutes of the class to take the quiz or until everyone is finished, whichever comes first. If you are late, you will have until the last (non-tardy) student is done to finish your quiz. No quizzes or exams will be dropped.

Participation- Classroom questions and discussion are encouraged. Please follow this protocol: 1) raise your hand and be recognized. 2) if a fellow student is asking a question or receiving an answer, don't start talking—you will probably benefit by paying attention. Wait your turn to be recognized if you wish to ask a follow-up question or make a comment.

Electronic devices- **LET ME BE VERY CLEAR, CELL PHONE USE IS NOT ALLOWED.** ALL



electronic devices including cell phones, cameras, texting devices, pagers, and Bluetooth or other wireless accessories must be turned OFF (not just set to vibrate) during class. **You will be asked to leave the class if you use these devices.** No video or still photography is permitted. Computers and voice recorders (tape or digital) are allowed during lectures as long as they operate without disruption (i.e. are muted and have been started up before lecture begins). **Absolutely NO electronic**

devices or activity of any kind are allowed during quizzes or exams. Presence of ANY such device results in an automatic zero on the exam.

Behavior- Everyone deserves an equal chance to learn the presented material. For this reason I have ZERO tolerance for disruptive behavior in the classroom. Disruptive behavior includes, but is not limited to, private conversations, talking out of turn, receiving phone calls or text messages, reading or studying unrelated materials, and intolerant or abusive behavior towards colleagues or the instructor. If a student's behavior is bothering you, you may report that student to me. Your report will remain anonymous. If you choose to behave inappropriately, you will be asked to leave the classroom and you may be dropped from the course. Persistent problems will be referred to the office of the Dean of Students.

Class withdraws- If you withdraw from the course after September 14, you will be assigned a grade of "W" (withdraw passing) or "WF", based on your grade average at withdrawal. I have the right to drop students from the course, but will not automatically do so; it is YOUR RESPONSIBILITY to initiate the process by acquiring the proper form and obtaining the required signatures before the deadline. The last date to withdraw for any reason is November 16.

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Academic honesty: Cheating (including plagiarism on any written assignments outside of class, or during quizzes or exam) **will absolutely NOT be tolerated**. You do not need to cheat to pass this course! Any evidence of cheating or plagiarism will result in a zero on the assignment or exam, and you will be reported to the academic affairs committee for formal reprimand. Repeated offenses can result in failure of the course and expulsion from Francis Marion University. Please refer to page 56 in the Student Catalog for specific information about the Francis Marion University policy regarding academic honesty.

How to succeed in this course:

- Come to class, pay attention, take good clear notes, and earn clicker points. Some material I present in class will not be covered in the textbook but you are still responsible for that material on quizzes and tests, so PAY ATTENTION!
- Review each day's lecture notes later that day.
- Do your homework BEFORE meeting with a study group or with me. Have questions ready to ask and be prepared to talk through concepts.
- QUIZ EACH OTHER! And be honest if your classmate didn't get it right.
- Keep up with the reading. The worksheets are aimed at getting you into the material before you come to lecture. In this way you won't be totally lost once you're in lecture.
- Do all of the assignments (they are your study guide for the quizzes and exams).
- Learn how to manage your time wisely. Don't try and cram a whole chapter (or more) worth of material in the night before an exam.
- Don't miss ANY quizzes or exams.
- MOST IMPORTANTLY!!! Come see me if you are having trouble, or if you have had trouble in the past and want to make a change. I CAN HELP, but only if you come find me. The sooner you ask for help the better. There is also tutoring available on campus, free of charge.