BIO 100 - GENERAL BIOLOGY

Class Nbr: 70682  Lecture: TTh 12:45pm - 2:10pm  Room: NS-137  Lab: Tue. 2:35pm - 5:40pm  Lab: NS-225

Instructor: Ron Langlois
Office Hours: Arranged
E-mail: rlanglois@palomar.edu

REQUIRED MATERIALS
ISBN: 978-0-07-802421-4


Field Trip: There will be a Saturday field trip this semester (to be arranged).

COURSE CONTENT
Biology 100 is an introductory course focusing on basic concepts, principles and fundamentals in the field of biology. We will be discussing these concepts and principles as they relate to cellular, organismic, and population levels of organization. We will cover a variety of topics including cell structure and function, energy transfer, genetics, evolution, diversity of organisms, and ecology. To help you develop a conceptual framework of biology most of the topics covered will be discussed in the context of interrelated themes including evolution and adaptation, unity within diversity, form and function, energy acquisition and usage, homeostasis, ecological interactions, heredity and reproduction, and science as a process.

Biology 100 requires above average effort. You should plan on spending a minimum of two hours outside of class for every hour you spend in class. Other than appropriate college level reading, writing and comprehension skills, there are no prerequisites for this course.

COURSE OBJECTIVES
The successful student will...

• Distinguish between science and non-science; delineate a method of scientific inquiry, characteristics of experimentation, observation and experimental design
• Describe the structure and bonding of atoms including covalent and ionic chemical bonds and list characteristics of acids and bases including the pH scale
• Describe structure and function of prokaryotic and eukaryotic cell components; compare proteins, lipids, carbohydrates and nucleic acids; discuss transport of materials across biological membranes and compare aerobic cellular respiration and photosynthesis
• Describe the process of protein synthesis, contrast mitosis and meiosis, predict patterns of inheritance based on Mendel's laws and discuss human genetic disorders
• List the basic characteristics of life and describe organizational levels and relationships of organisms to each other and to their physical environment
• Discuss the mechanisms of evolution, compare kingdoms and other divisions of a classification system and discuss phylogenetic trends in plants and animals
• Describe energy flow and nutrient cycling in ecosystems, the process of succession and compare aquatic and terrestrial ecosystems
• Discuss the impact of humans on ecosystems and the implications of modern molecular biological technology in science and society

COURSE STUDENT LEARNING OUTCOMES (SLO’s)
The Student Learning Outcomes for this course are as follows:

• Students will be able to apply the scientific method to a research question. They will be able to synthesize a basic experiment identifying the independent, dependent and outside variables of the experiment as well as describe the experimental group and control group. Students will be able to apply this knowledge and be able to evaluate information obtained scientifically.
EXAMS
There will be 4 exams (100 pts. each) covering class discussions, assigned readings and laboratory materials. Exam questions may be multiple choice, short answer / essay, or some other format explained in advance of the exam. You are responsible for all materials presented in lecture, lab or given as assigned reading. Punctual attendance is suggested as you will not receive additional time to work on an exam should you show up late for class. If you cannot take an exam on the scheduled date, it is your responsibility to make arrangements with the instructor prior to the test date. Exams taken after the original test date may be assessed a 20% late work deduction penalty if not prearranged with the instructor. The final exam for this course will be given on the last day of lecture; there no longer is a scheduled ‘finals’ week. For proposed test dates and assigned readings, consult the schedule accompanying this document.

ADDITIONAL GRADED MATERIALS
Your laboratory manual (100 pts) will be graded at the end of the semester. Points will be assigned for completeness (i.e. answering all of the questions in your lab manual for all assigned experiments), and for adherence to protocols for filling out the lab manual (discussed in lab). Additionally, there is a writing component to this course and you will be required to write a research paper (100 pts) and present your findings to the class in the form of a 5 minute talk with a brief Q&A session. Research topics, criteria and due date will be discussed in class (or lab). All graded materials must be submitted by the appropriate due date to avoid a 20% grade reduction for late work.

GRADES
The time to start worrying about your grade is TODAY! Don’t wait until the last week of school and then panic when you realize you are not doing well in the course. By then, it is usually too late to do much about it. Approaching each exam with your best efforts will increase your chances of succeeding in this course. Your grade will be based on the percentage of the total points you accumulate according to the scale: A = 90 - 100%; B = 80 - 89%; C = 70 - 79%; D = 55 - 69%; F = 0 - 54%. No “extra credit” assignments will be available in this class.

Lab is NOT optional. Your lab partner(s) will depend on you to do your portion of the lab experiments. Two (2) or more unexcused absences from lab will result in your grade being reduced regardless of your test scores. Borderline grades can be improved with classroom and lab participation.

ATTENDANCE
Regular and punctual attendance is required. Unexcused absences prior to the census date for this course will result in your being dropped from the course. After the census date, three (3) or more unexcused absences may also result in your being dropped from the course. Since tardiness disrupts the class, plan to be on time. Chronic tardiness or disruptive behavior may result in your being dropped as well. Attendance and participation in classroom discussions and laboratory experiments are a vital part of the learning experience so plan on attending each class and lab. Topics other than those listed in the accompanying schedule may be addressed during classroom or lab discussions and may be included on exams.

ACADEMIC Dishonesty
Cheating will not be tolerated and will result in a failing grade for the assignment and a failing grade for the course on the second occurrence. Each student is expected to do his/her own work unless otherwise instructed. Cheating includes, but is not limited to, giving or receiving exam questions or answers, plagiarism (i.e. copying word for word from a reference without a citation) and copying assignments or lab exercises without doing the original work. All work must be completed by you and submitted in your own words unless otherwise instructed.

MISCELLANEA
Classroom Etiquette
No electronic devices of any kind are permitted in the classroom for any reason. Electronic devices are a distraction to you, me and nearby students and they interfere with the learning experience. If you cannot devote your time and attention to this class without texting or updating your Facebook page, take another course. This class will require your full attention. If an emergency dictates use of your phone during class, exit the classroom quietly before beginning a conversation. If you are late for class or know you will be leaving early for some reason, please sit in the back of the room. Do not enter or leave through the front door of the classroom on such occasions. If you cannot attend a class session, consult with other students upon your return to determine what you missed. I will not respond favorably (if at all) to the question, “Did I miss anything?” Assume you did miss something and follow the protocol established for getting informed. Be courteous to me and your fellow classmates and do not talk during classroom presentations unless you have a question or something to contribute to the discussion. In that event, please direct your questions or comments to me.

Dropping Course
If you wish to drop this class, it is your responsibility to do so. You will receive a failing grade (F) should you stop attending class and fail to drop the course through official channels. Students may be dropped for any unexcused absences in the first two weeks of class to allow waiting students to add the course.

Schedule
I will make every effort to adhere to the schedule included herein, however, lecture topics, exams and assignment due dates may vary according to conditions that occasionally arise. Announcements, including changes to the schedule if any, will be given at the beginning of lecture. Make it a point to be on time so you can stay informed. If you come to class late, ask another student for updates. I do not repeat announcements for everyone who comes to class late.

Other Services
If a disability might affect your classroom performance, notify me as soon as possible. Palomar offers a variety of services and equipment for student use on campus that you may find helpful.
IMPORTANT DATES

Last Date for Wait List: 08/16/2016
Semester Begins: 08/21/2016
Last day to audit P / NP: 09/21/2016
Semester Ends: 12/16/2016
Last day to drop with W: 10/14/2016
Last day to add without permission: 08/27/2016
Last day to add with permission: 09/04/2016
Final Exam: 12/14/2016

IMPORTANT NOTICES

Because of the loss of funding that occurs when students fail to add a class by the add deadline, the Life Sciences Department (under direction from the Dean of Mathematics and Natural and Health Sciences) is adhering to the following policy:

"Only students who are officially registered may participate in this class. If you are given a permission code to add this class, you must officially add the class prior to the next class meeting. If you have difficulty using the colleges computerized enrollment system to add, please notify the instructor immediately. The deadline for adding any class or using a permission code to add is the end of the second week of classes or within 20% of class meetings.

Under no circumstance will students be allowed to add this class after the add deadline."

Both the 3x repeatability cap AND the last date to withdraw without notation are now being enforced. What this means to you is:

- If you have attempted a course three times, you will not be allowed to enroll in that course again. The repeat cap is retroactive which means ANY notation (A, B, C, D, F, FW, W, or I) attached to a class counts as an attempt.

- The last date to withdraw without notation will be the census date. If you are enrolled in a class after the census date, there will be a notation attached to the class (A, B, C, D, F, FW, W, or I) and it will be counted as an attempt in the 3x repeatability limit.

SOME THOUGHTS...

Science courses should not be regarded as being “too hard”, boring or irrelevant. On the contrary, science can be creative, rewarding and fun! Most importantly, biology is applicable to your lives outside this classroom. You will be reading about and voting on issues that will require an understanding of some science either to make informed decisions or to understand what you are reading. Food additives, medical treatments, cloning, stem cells, pharming, recombinant DNA, habitat destruction, global warming, pesticide and drug resistance, GMO’s, designer genes... these are some of the issues we will be discussing this semester that are relevant to your lives now!

I want you to succeed in this course and I will make every effort to help you understand the material presented this semester. Learning requires a commitment on your part as well. What you get out of this class is a result of the effort you put into it. You will earn your grade by your efforts and this is not a class that can be passed with minimal effort. I can help you understand the materials presented in this course, but ultimately, you must do the learning -- I can not learn it for you. The comment “I didn’t learn anything in that class” says more about the one making the comment than about the instructor of the course. No one can teach you something you are unwilling to learn. Expect learning new concepts to be difficult and frustrating at times, but sustained effort usually pays in personal development and academic dividends.

Successful students come to class prepared. Read the material to be discussed before coming to class and be ready to ask questions on topics you found difficult to understand. Don’t wait until the last moment to study for an exam; you will find there is too much information to process in a short period of time. Tutors are available (STEM center) if you are having difficulties with the material and you can always email me or see me after class or in lab if you need help understanding a biology concept. Remember, your attitude and commitment will determine your success in this course and others.

I look forward to working with you this semester, and will do my best to make this course informative, enjoyable and relevant. Your ideas are important and I appreciate any suggestion that will help make this course a more rewarding experience for students. You can always email comments to me or leave them anonymously in my faculty mail box (NS-207).

Welcome to Biology 100!
Please complete the following information and return within the first 2 weeks of class.

Name: ________________________________   ________________________________  
   (please print legibly)        (preferred name)

Major (Undeclared if none):

Science Courses Taken (High School or College):

Topics of Interest in Biology (Something you would like to see covered in this course):

Concerns (allergies, conditions that require medical attention, DRC consideration, etc.):

EXAMINATION AGREEMENT: I understand that, when taking exams, it is my responsibility to clearly demonstrate my knowledge of definitions, concepts and any other materials presented in class, lab or assigned as reading. I understand it is my responsibility to convey my knowledge clearly, legibly and in a manner not requiring interpretation by the instructor. I understand that, if I cannot take an exam on the scheduled date, it is my responsibility to make other arrangements with the instructor prior to the test date, and I may receive a 20% late work penalty for taking an exam after the assigned date if I failed to notify the instructor in advance.

FINAL GRADE AGREEMENT: I understand that unless an error was made entering one of my grades, I will not ask the instructor to change my grade nor will I ask for extra credit assignments if my total semester points fall below the cut off for a particular grade -- regardless of how many points I am short of the cutoff. I understand that it is my responsibility to keep my assignments and grades should a dispute arise. I further understand that if I want a specific grade in this class it is my responsibility to earn that grade over the course of the entire semester. It is not my instructor’s responsibility nor would it be fair to other students to assign me a grade I did not earn. I understand there are no exceptions to this rule for any student in the class.

ATTENDANCE AGREEMENT: I understand that regular and punctual attendance is required to be successful in this class. I agree that I am responsible for all material presented in class including topics other than those listed in the accompanying schedule that may be addressed during classroom discussions. I agree that attendance and participation in classroom discussions is a vital part of the learning experience and I will attend class and participate in class-time activities. I understand that unexcused absences prior to the census date may result in my being dropped from the class. After the census date, three (3) or more unexcused absences may also result in my being dropped from the course. Since tardiness disrupts the class, I plan to be on time for each discussion. I also understand that lab attendance is required and unexcused absences will result in my grade being reduced regardless of my test scores.

CLASSROOM ETIQUETTE AGREEMENT: I understand that activities such as texting, listening to music, web-surfing, conversing with other students, or working on homework from other classes distracts me from my primary task of learning biology and I agree not to engage in these or other distracting activities during the lecture / discussion period. I also understand that no electronic devices of any kind are permitted in this class since they are a distraction to me, the instructor and nearby students and I agree not to use any such devices for any reason. Since it wastes valuable class time for the instructor to constantly remind me not to use such devices, I also understand that the use of any electronic equipment in class will result in a warning for the first offense and being dropped from the course for an additional offense.

I have read, understood and will comply with the agreements stated above  ________________________________  
   (signature)