POLK STATE COLLEGE

BSC 1010C PRINCIPLES OF BIOLOGY I

LAKELAND DEAN'S OFFICE: LLC 2255 PHONE: (863) 297-1024

WINTER HAVEN DEAN'S OFFICE: WSC 101 PHONE: (863) 297-1020

CREDIT HOURS, PREREQUISITES, AND COURSE DESCRIPTION:
3 hours Lecture, 2 hours Lab, 4 credits
Prerequisite: Placement at the college level or completion of required college preparatory courses

This course is the first of a two-term sequence in the biological sciences that is designed specifically for pre-professional majors. Basic concepts and principles of biology are covered in detail. Topics include scientific measurement, basic biochemistry, cytology, energy relations, reproduction, and a detailed analysis of photosynthesis and cellular respiration, as well as classical and molecular genetics. Lecture presentation, in combination with laboratory study, emphasizes critical thinking, observation, and experimental assessment.

PSC MISSION AND CORE OBJECTIVES: Polk State College is a quality-driven educational institution, providing access to affordable associate and baccalaureate degrees, career certificates, and workforce development programs, delivered by diverse, qualified faculty and staff who are committed to student learning and achievement through the consistent practice of collaboration and focus on excellence. In line with this purpose, PSC's general education develops competence in the areas of 1) Communication, 2) Critical Thinking, 3) Scientific and Quantitative Reasoning, 4) Information Literacy, 5) Diversity, 6) Culture, 7) Ethics and 8) Social Responsibility. Please see the PSC catalog for complete descriptions of these outcomes. A primary focus of this course is competence related to the areas of:

2. **Critical Thinking**
   Demonstrate the ability to reflect on, analyze, synthesize, and apply information through problem solving

3. **Scientific and Quantitative Reasoning**
   Apply mathematical and scientific principles and methods to solve abstract and real-world problems

4. **Information Literacy**
   Demonstrate the ability to access, evaluate, incorporate, organize, and document information

STUDENT LEARNING OUTCOMES: Students will be able to:
1. demonstrate competency in analyzing written or graphical data to interpret results. (2, 3)
2. use laboratory experiences and materials to demonstrate competency with biological concepts and applications. (2, 3)
3. demonstrate the ability to interpret or apply appropriate terminology in a specific biological science. (4)
4. integrate biological concepts by comparing and contrasting biological organisms, theories, processes, physiological mechanisms, and/or anatomical structures. (2)

5. engage in collaborative tasks (i.e. work in teams).
6. demonstrate knowledge-base in a specific biological science.

TEXTBOOK AND OTHER REQUIREMENTS:
For textbook information, visit the campus bookstore, the bookstore website at www.efollet.com, or see the course syllabus.

COURSE CONTENT:

Lab Topics	Lecture Topics
1. Scientific investigation	1. Introduction
2. Microscope and cells	2. Diversity and unity of life
3. Measurements	3. Chemical background
4. Organic molecules	4. Biochemistry
5. Osmosis and diffusion	5. Cell structure and function
6. Enzymes	6. Photosynthesis
7. Mitosis and Meiosis	7. Cell respiration
8. Photosynthesis	8. DNA structure
9. Cell respiration	9. Protein synthesis
10. DNA modeling	10. Mendelian genetics
11. Human genome	11. Modern genetics
12. Electrophoresis	12. Reproduction

METHODS OF INSTRUCTION: These will vary according to specific course objectives, student learning needs, and instructional style.

THE GORDON RULE: The Gordon Rule, State Rule 6A-10.30, requires A.A. program students to complete six semester hours of English and six semester hours of additional courses in which the student must demonstrate college-level writing skills through multiple assignments Because PSC uses a "Writing Across the Curriculum" approach to meeting the writing requirement, in addition to the required composition courses, any of the required social sciences and humanities courses will fulfill the writing requirement.

This is not a Gordon rule writing course, but it may include writing assignments as part of course requirements.

In addition, State Rule 6A-10.30 requires A.A. program students complete six credits of college level mathematics. Taking the appropriate general education mathematics courses satisfies the mathematics portion of the requirement.

A minimum grade of “C” is required in all courses with primary responsibility for fulfilling the communications and mathematics areas of the general education requirements. This includes any course taken to complete the general education mathematics requirement, and the courses taken to complete the communications requirement.

STUDENT HELP: The instructor is available for help during posted hours and by appointment during other non-class hours. Students are encouraged to seek assistance from the instructor. To further the educational process, the Teaching /Learning /Computing /Center (TLCC) provides qualified staff and up-to-date equipment and facilities to promote student academic success by providing tutoring services, computing resources, and other instructional support. TLCC hours of operation and tutor schedules are posted in the TLCCs and available on PSC's website at: www.polk.edu/it/tlcc.

WITHDRAWAL: Students may officially withdraw from course(s) during any given term provided the appropriate policy and procedure is followed. Following the conclusion of the Drop/Add period, the student may officially withdraw without penalty from any credit course provided the appropriate forms are submitted to Student Services no later than the deadline published in the term schedule booklet. (The published deadline reflects the 70% point in the course based upon the course's scheduled duration). It is the student's responsibility to submit these withdrawal forms. Failure to do so may result in an "F" in the course. By State rule students are not allowed to withdraw from the third course attempt. If students stop attending class after the deadline, or any time during the third attempt, a grade other than a "W" is assigned and posted. Students cannot use course withdrawal to avoid academic dishonesty penalties. Students who have been penalized for academic dishonesty in a course are not eligible to withdraw from the course.

REPEATING A COURSE: Under the Forgiveness Policy, a student is allowed three attempts in any one college credit course: one initial enrollment and two repeats. A course cannot be repeated unless the previously earned grade is a "D," "F," or "W" (see college catalog for details). Students are not allowed to withdraw from their third course attempt. If students stop attending class, a grade other than a "W" is assigned and posted.

ACADEMIC INTEGRITY: Students are responsible for their own work. It is assumed that each student is honest and will abide by that standard. However, in the event there is an indication or suspicion that there has been a case of cheating/plagiarism, the situation will be dealt with in accordance with published College policy. Copies of this policy are available in Student Services offices.

INFORMATION TECHNOLOGY ACCESS/USE POLICY: All individuals who employ information technology resources provided by Polk State College (this includes, but is not limited to telephones, computers, the PSC local area and wide area networks, and the Internet) must use these resources for academic purposes only. Use of these resources is a privilege, not a right. Inappropriate use can result in revocation or suspension of this privilege.

EQUAL OPPORTUNITY FOR STUDENTS WITH DISABILITIES: If you are a student with a disability and will need special accommodations or auxiliary aids under the Americans with Disabilities Act (ADA), please contact the Coordinator of Academic Advising in Student Services on the Lakeland Campus (863) 297-1000 Ext. 6107 or the Winter Haven Campus (863) 297-1000 Ext. 5227.

EVALUATIVE CRITERIA: The final course grade will be determined from a combination of lecture and laboratory assessments.

LECTURE COMPONENT

Lecture exams (4-6)	60 - 75%
Assignments	0 - 15%

The last lecture exam will be given during final exam week.

LAB COMPONENT

Lab practicals, lab reports and activities	25%

At least half of lab component comes from lab practicals (mid-term and final practicals). There is NO extra credit, and there are no dropped exam scores. Exact course grade calculations will be explained by individual instructors, on the first day of class, through their specific course information sheet.

The grading scale is as follows:

A = 90-100% B = 80-89% C = 70-79% D = 60-69% F = 0-59%

ATTENDANCE: Regular attendance is the student's responsibility. Failure to attend class regularly severely hinders your chance of successful completion of this course. Tardiness OR leaving a class early will count as 1/2 an absence. A student may be dropped from class for excessive absences (more than 5 lecture or lab hours). A student dropped before the no-fault drop deadline will receive a grade of “W” (unless it is a third attempt of the class). Withdrawals are not permitted on the third course attempt. A student dropped AFTER the no-fault drop deadline OR dropped on his/her third attempt of the class will receive a grade of “F.” *It is not the instructor's responsibility to drop a student who stops coming to class; this is the responsibility of the student.*

WORK MISSED: As a general rule, students need to take exams in their scheduled class section and must complete assignments and class papers according to their due dates. There are no make ups for missed lab exams, or in class activities and quizzes. In addition there are no dropped exams, retests, or extra credit.