

## POLK STATE COLLEGE

### PSC 1121 SURVEY OF PHYSICAL SCIENCE

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

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#### CREDIT HOURS, PREREQUISITES, AND COURSE DESCRIPTION:

3 hours Lecture, 3 credits

Prerequisite: Placement at the college level or completion of required college preparatory courses

This course discusses selected topics in chemistry and physics at the introductory level. Included in these topics are the structure of the atom, a study of the periodic table, the process of chemical bonding, and the study of chemical equations and types of compounds. This course also discusses mechanics, wave motion, heat, light, optics, electricity, and nuclear radiation. Demonstrations and multimedia presentations enhance the presentation of the course material.

**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:

#### 3. SCIENTIFIC AND QUANTITATIVE REASONING

Apply mathematical and scientific principles and methods to solve abstract information through problem solving.

#### 4. INFORMATION LITERACY

Demonstrate the ability to access, evaluate, incorporate, organize, and document information.

#### COURSE OBJECTIVES: Students will:

1. follow the scientific method, evaluate/interpret both quantitative and qualitative data pertaining to quantitative information involving the structure of the atom, a study of the periodic table, chemical bonding, chemical equations, types of compounds, mechanics, wave motion, heat, light, optics, electricity, and nuclear radiation, (3)
2. apply the scientific principles formed from the physical laws and scientific method to a new set of phenomena involving the structure of the atom, a study of the periodic table, chemical bonding, chemical equations, types of compounds, mechanics, wave motion, heat, light, optics, electricity, and nuclear radiation, (3)
3. organize information from lectures, text, and Internet resources involving the structure of the atom, a study of the periodic table, chemical bonding, chemical equations, types of compounds, mechanics, wave motion, heat, light, optics, electricity, and nuclear radiation, (4)
4. learn basic course content involving the structure of the atom, a study of the periodic table, chemical bonding, chemical equations, types of compounds, mechanics, wave motion, heat, light, optics, electricity, and nuclear radiation.

**TEXTBOOK AND OTHER REQUIREMENTS:**

For textbook information, visit the campus bookstore, the bookstore website at [www.efollet.com](http://www.efollet.com), or see the course syllabus.

**COURSE CONTENT:**

Chapter 1 The Scientific Method  
Chapter 2 Motion  
Chapter 3 Energy  
Chapter 4 Matter and Energy  
Chapter 5 Electricity and Magnetism  
Chapter 6 Waves  
Chapter 7 The Nucleus  
Chapter 8 The Atom  
Chapter 9 The Periodic Law  
Chapter 10 Crystals, Ions, and Solutions  
Chapter 11 Chemical Reactions  
Chapter 12 Organic Chemistry

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

**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](http://www.polk.edu/it/tlcc).

**ATTENDANCE:** Regular attendance is the student's responsibility. If a student has excessive absences (more than 3 hours), he/she may be dropped from the course with a "W" grade before the withdrawal date. After the withdrawal date, a student may receive an "F" grade for the course for excessive absences (more than 3 hours accumulated since the beginning of the term). Special circumstances may be considered by the instructor on a case-by-case basis.

**WORK MISSED:** Procedures for work missed are determined by the instructor.

**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.

**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.

**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.

**STUDENT ASSESSMENT:** The evaluative criteria are determined by the instructor. The grading scale is determined by the instructor.