

EFFECTIVE: FA2006

COURSE INFORMATION

COURSE PREFIX/NUMBER: **PHS 101**
COURSE TITLE: **Physical Science I**
LEC HRS/WEEK: 3.0
LAB HRS/WEEK: 3.0
CREDIT HRS/SEMESTER: 4.0

DL ATTENDANCE/VA INFORMATION TEXTBOOK INFORMATION

COURSE DESCRIPTION (from the State Board Catalog of Approved Courses)

This is the first in a sequence of courses in Physical Science and includes an introduction to science with emphasis on science terminology and investigations of the physical world. Topics are selected from Astronomy, Chemistry, Geology and Physics.

COURSE COMPETENCIES

1. Describe the meaning of science and the branches of science.
2. Illustrate the Scientific Method.
3. Demonstrate an understanding of terminology and proper units related to Physical Science.
4. State laws and principles related to Physical Science.
5. Apply concepts, laws and principles to the solution of problems related to Physical Science.
6. Perform laboratory procedures in a safe manner, following instructions.

PERFORMANCE OBJECTIVES

1. Given directions, the student will be able to follow written and oral instructions as evidenced through observation and laboratory reports, based on guidelines provided by the instructor.
2. Given a report format and lab procedures, the student will be able to perform (in a safe manner) and write up experiments. Criteria for acceptable performance will be provided by the instructor.

Mastery of the following objectives will be indicated by 60% proficiency on written/oral evaluation instruments, such as, tests, quizzes, homework,

3. Given knowledge, the student will be able to define and give proper units of terms related to Physical Science.
4. Given knowledge, the student will be able to state laws and principles related to Physical Science.
5. Given appropriate information, the student will be able to apply terminology, principles and laws to the solution of problems related to Physical Science.

REVIEW of the following:

Acceptable performance of the below five (5) objectives will be indicated by application of these objectives in the solution of problems related to the above performance objectives.

1. Given a linear equation, the student will be able to solve the equation.
2. Given information, the student will be able to illustrate the use of geometry through applications.
3. Given a number, the student will be able to convert the number to scientific notation and vice versa.

4. Given a calculator and algebraic expressions, the student will be able to evaluate the expression.
5. Given a word problem, the student will be able to define the problem, solve the equation and evaluate results.

COURSE REQUIREMENTS

Attendance Policy

"Students are responsible for attending all scheduled meetings in the courses in which they are enrolled until they have completed all course requirements. Students are responsible for all material covered and for all assignments made in all classes. Students who are absent from a class more than 20 percent of the hours assigned will be withdrawn." See Withdrawal from a Course below.

Each student is required to attend 80% of the contact hours for the course (96 for PHS 101). Any student who is absent 19 contact hours (lecture and lab combination) must be withdrawn in accordance with the York Technical College attendance policy.

Withdrawal from a Course

"A student may withdraw from the course after the add/drop period until mid-term with a grade of "W". To withdraw from a course, the student obtains a Request for Withdrawal from his advisor or from Student Services. If a student withdraws from a course after mid-term, the grade received is determined and assigned by the instructor for that course."

See attached instructor's individual policy for additional information on grade received ("F" or "W") when a student is withdrawn from a course due to absenteeism.

Student Conduct

"York Technical College adheres to the South Carolina Tech Student Code, approved by the State Board for Technical and Comprehensive Education on March 13, 1974, and revised June 13, 1979, and again on April 25, 1984." Copies of this code are available in the Library and from Student Services.

The College expects all students to conduct themselves with dignity and to maintain high standards of responsible citizenship. All students are expected to conform to all conduct codes specified in the York Technical College Handbook and Catalog, in particular to the policy concerning academic honesty:

"Any student caught cheating or involved in any other academic dishonesty will be given a grade of zero and will be subject to further disciplinary action."

Laboratory Attendance Requirements

Physical Science I is a 4.0 credit hour course with 3.0 lecture hours and one 3.0 hour lab per week. The lab grade will count as one-fourth of the total course grade. Each student is required to attend 80% of the contact hours for the course (96 hours for PHS 101). Any student who is absent 19 contact hours, lecture and lab combination, must be withdrawn in accordance with the York Technical College attendance policy. See Withdrawal from a Course. Student's attendance is required for ALL lab sessions. It is the STUDENT'S RESPONSIBILITY to arrange with his/her instructor to make up any lab that is missed. With instructor's permission, any lab session missed can be made up during the same week while the equipment is still set up. If this is not possible, the last week of the semester will be reserved for make up labs. Only ONE experiment can be made up during the make up week. There will be a 10 point reduction in the lab grade for each missed lab that is not made up. If a student fails to make up as many as three missed labs, his/her total lab grade will be recorded as zero. For example, a student who misses several lab sessions during the semester may make up all lab sessions by attending another scheduled lab session during the week in which the lab was missed (with instructor's permission). However, only ONE of those missed labs sessions can be made up during make up week.

Transferability

A grade of "C" or better in the course is required for college transfer credit.

TESTING PROCEDURES/GRADING

Testing Procedures

"York Tech has an optional examination policy. Faculty in each department make the decision whether to give a final cumulative-type examination in each course in the department or whether to evaluate achievement in the course by periodic tests and daily grades without a final examination." There is no comprehensive examination in PHS 101.

Grading

"The College operates on a quality point system. Semesterly credits represent the number of credit hours completed with a passing grade; quality points are determined by the grade earned. Each grade is assigned a grade-point equivalent in quality points for each credit hour scheduled. Grade point ratio equals the sum of quality points divided by the sum of the semester credits carried. Letter grades indicate the following achievement:

A Excellent "A" indicates achievement of distinction and carries a value of four grade points for each credit hour.

B Above Average "B" indicates above-average achievement and carries three grade points for each credit hour.

C Average "C" indicates average achievement and carries a value of two grade points for each credit hour earned.

D Below Average "D" indicates below-average achievement but acceptable credit toward graduation at York Technical College and carries one grade point for each credit hour.

F Failure "F" earns no credit hours; carries no grade points for each credit hour attempted.

W Withdrawn "W" earns no credit hours; generates no grade points.

I Incomplete "I" is given to a student who is allowed for an acceptable reason to postpone beyond the end of the quarter completing part of a class requirement. "I" earns no credit hours and generates no grade points. Incomplete grades will result in a grade of "F" if not removed by the student before the last day of the sixth week of the following quarter."

See attached instructor's individual policy for additional information on grading.

EVALUATION STRATEGIES

In this course, the lab grade counts as one-fourth of the total course grade, therefore:

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|---------------|------|
| Lecture Grade | 75 % |
| Lab Grade | 25 % |

The lecture grade will be obtained from the evaluation of competencies using oral/written evaluation instruments. A minimum of three tests will be given. Certain competencies, at the instructor's discretion may further evaluated through homework, comprehensive test and other evaluation instruments. See attached instructor's individual policy for more information in the determination of the final grade in this course. The lab grade will depend on participation in the lab experiment, student conduct and on a laboratory notebook. Additional information will be provided by the lab instructor on the first day of lab.

ENTRY LEVEL SKILLS - Non applicable

PREREQUISITES - None, but a successfully completed course in math (Beginning Algebra) is recommended.

CO-REQUISITES - None

TOPIC/CONTENT OUTLINE

Introduction to Physical Science

Scientific Method

Motion

Energy

Matter and Energy

Electricity and Magnetism

Atomic Structure

Periodic Law

The Solar System

Earth as a Planet