



REID STATE TECHNICAL COLLEGE

SPRING 2018

I. PHY111D---PHYSICAL SCIENCE I

Theory 3 Credit hours

Lab 1 Credit hour

Clinical 0 credit hours

Total 4 credit hours

Total Contact hours – 5

II. CLASS MEETING DATES/TIMES/LOCATION

WEDNESDAY 1:00-5:30PM

III. CLINICAL DATES/TIMES/LOCATION

(None)

IV. INSTRUCTOR, CONTACT INFORMATION, CONTACT POLICY, OFFICE HOURS/LOCATION

Daphne Joyner

Office: Library/Second Floor, Room 218

Office Phone: (251) 578-1313, ext. 244

Other Phone: (251) 809-4066 (Call or text)

Email: djoyner@rstc.edu

Office hours are posted on office door on the Evergreen campus.

V. COURSE DESCRIPTION:

This course provides an introduction to the basic principles of geology, oceanography, meteorology, and astronomy. It will also introduce principles on measurement, matter, Newton's laws of motion, motion, energy, work, power, heat, waves, sound, light, electricity, magnetism, and chemical solutions, mixtures, bonding, structure, classifications such as acids, bases, alcohols, hydrocarbons etc. Laboratory experience is required.

VI. PREREQUISITE(S)/CO-REQUISITE(S)

PREREQUISITE COURSES

None

CO-REQUISITE COURSES

None

VII. TEXTBOOK(S) AND OTHER LEARNING RESOURCES

Shipman, James T., Jerry D. Wilson, and Charles A. Higgins, Jr. *An Introduction to Physical Science* (13th ed). United States: Cengage Learning, 2013.

Allison, Mead A., Arthur T. DeGaetano, and Jay M. Pasachoff. *Earth Science*. Austin, TX. Holt McDougal Houghton Mifflin Harcourt Publishing Company, 2010.

Horner, Mark et al. *The Free High School Science Texts: Textbooks for High School Students Studying the Sciences, Physical Science*. (Version 0.5). Free High School Science Texts, 2007.

Various virtual labs

two-pocket folder or a binder (to keep notes and handouts in)

VIII. PROFESSIONAL COMPETENCIES/OBJECTIVES

1. Perform measurements using metric system principles and scientific notation.
2. Identify and name states of matter, elements, atoms, and compounds.
3. Distinguish between chemical and physical changes and properties.
4. Describe matter's atomic structure using the periodic table.
5. Distinguish the types of chemical bonding and write formulas to represent each bonding, being sure whole chemical bonding reaction is balanced.
6. Describe the chemical and physical properties of water and its importance.
7. Distinguish among solutions, mixtures, and colloids and provide examples of each.
8. Describe properties of acids, bases, pH, hydrocarbons, alcohols, esters, and ethers.
9. State and describe Newton's laws of motion and complete motion problems.
10. Define work, energy, power, and heat as they associate with motion and complete mathematical problems to measure each as motion happens.
11. Define and describe the Kinetic Theory principles.
12. Classify the different types of waves.
13. Distinguish between light and sound waves.
14. Describe the properties of electricity, magnetism, and light.
15. Distinguish between DC/AC circuit and current characteristics.
16. Describe features of the ocean floor and the elements that make up the ocean-floor sediments.
17. Describe movements of the ocean, its currents and tides.
18. Distinguish among the different types of rocks and their physical and chemical properties.
19. Describe how weathering and erosion changes the chemical and physical properties of landforms and other substances.
20. Distinguish between weather and climate.
21. Distinguish between renewable and nonrenewable resources.
22. Describe the properties of the inner and outer planets.
23. Describe the structure and purpose of the moon, sun, and stars.

IX. LEARNING OUTCOMES

1. The students will be able to complete problems on work, energy, power, heat, and motion and write answers in standard units and convert to metric units and scientific notation.
2. The students will be able to identify substance as an element, atom, or compound and explain why.
3. The students will be able to describe the structure of an atom or element by using a periodic table.

4. The students will be able to name chemical compounds involved in chemical bonding and write formulas for them and the whole bonding reaction and balance the whole bonding reaction.
5. The students will be able to identify the different types of chemical bondings.
6. The students will be able to perform Newton's laws of motion.
7. The students will be able to identify solutions, colloids, and mixtures.
8. The students will be able to classify solutions as acids, bases, hydrocarbons, alcohols, esters, and ethers.
9. The students will interpret the pH of different solutions using litmus paper, numbers, and ion concentration.
10. The students will be able to classify changes as chemical or physical and explain why.
11. The students will be able to classify waves into correct categories and justify their classifications, including light and sound waves.
12. The students will be able to describe how electricity and magnetism works.
13. The students will be able to develop a light spectrum.
14. The students will be able to develop a model of a DC and AC circuit.
15. The students will be able to describe all the components that make up ocean water and the ocean floor and how this water and the components move.
16. The students will be able to identify different rocks based on their physical and/or chemical properties.
17. The students will be able to describe if weather is happening or a place is under a climate.
18. The students will be able identify substances or things as renewable or nonrenewable resources in an environment.
19. The students will be able to locate the inner and outer planets and describe how the location of each may play a role in their properties.
20. The students will be able to describe how and why the moon, sun, and stars exist and what substances each are made up. The students will identify different constellations.

X. OUTLINE OF TOPICS AND CHAPTERS

Topic 1: Units of measurement; converting to metric system and using scientific notation

Topic 2: Motion: energy, power, work, and heat

Topic 3: Newton's laws of motion

Topic 4: States of matter, elements, atoms, and compounds and Kinetic theory

Topic 5: Atomic or element structure and chemical bonding

Topic 6: Writing and balancing formulas for chemical bondings

Topic 7: Solutions, mixtures, and colloids

Topic 8: Chemical and physical changes

Topic 9: pH, acids, bases, hydrocarbons, alcohols, esters, and ethers

Topic 10: Types of waves

Topic 11: Electricity, magnetism, light, and currents

Topic 12: Oceanography

Topic 13: Geology

Topic 14: Meteorology

Topic 15: Astronomy

XI. EVALUATION AND ASSESSMENT

DAILY WORK (LABORATORY EXERCISES, WORKSHEETS, AND PROJECTS).....25%

CHAPTER TESTS AND LAB EXAMS.....40%

AVERAGE OF MIDTERM AND FINALEXAMS.....35%

GRADING SCALE

LETTER GRADE AND NUMBER GRADE

A 89.5-100

B 79.5-89.4

C 69.5-79.4

D 59.5-69.4

F 0.00-59.4

W NONE; WITH DREW

I NONE; INCOMPLETE

A grade of "D" or "F" is not acceptable in any course in the practical nursing curriculum, including math, English, and biology. A student must maintain a "C" or better to progress. The student has one semester to make an incomplete grade become a complete grade after the incomplete was awarded as a final grade. It is the student's responsibility to resolve incomplete final grades. If the incomplete grade is not resolved, it converts to a grade of "F."

XII. MAKE-UP WORK REQUIREMENTS

Make-up chapter tests and lab exams will be permitted given student has called, emailed, texted, or provided a written excuse on the day the chapter tests and/or lab exams are given. Without one of until a WRITTEN DOCTOR'S EXCUSE is turned in. The format of the make-up chapter tests and/or lab exams will be at the instructor's discretion. Original chapter tests and lab exams will have different formats, including but not limited to, multiple choice, matching, fill-in-blank, and short answer. Makeup deadline will be given to the student, and student must contact instructor with a date and time to make up before or on the deadline date. If not taken care of, a zero will be applied. All chapter tests and lab exams must be made up before the midterm or final exam they precede, or the student can't take the midterm or final exam on time and will have to do a make-up midterm or final exam. Makeup midterm and final exams require a call, email, text, or written excuse and then PERMISSION by the instructor to make up. Please be sure there is documented permission from the instructor. Original midterm and final exams have the same formats as the original chapter tests and lab exams; however, make-up midterm and final exams formats are at the discretion of the instructor.

Make-up laboratory exercises follow the same guidelines listed above for make-up chapter tests and lab exams. Worksheets are able to be made up without a call, email, text, or written excuse; however, the student must make up the worksheet before a deadline date he/she is given and must be prepared to Come within office hours of the instructor to make up. If not made up by or on deadline date, a zero will be applied.

It is the student's responsibility to keep us with all missed assignments and arrange to make-up the missed assignments before or on the deadline dates provided.

XIII. CLASSROOM RECUREMENTS AND OCCURRENCES

1. Chapter tests, lab exams, midterm exam, and final exam will be taken after the first five minutes of the beginning of class. Chapter tests and lab exams are given one hour and fifteen minutes, unless the student has a documented accommodation to take longer. Midterm and final exams are given two hours to take, unless the student has a documented accommodation to take longer. (SEE AMERICANS WITH DISABILITIES SECTION) if the student is late arriving on the day of the chapter test, lab exam, midterm, and/or final, he or she needs to decide if he or she has enough time to take the test. If the student decides he or she does not have enough time, then the student will have to do a makeup. Remember, the format of this make-up will be at the discretion of the instructor so it could be essay format. Once the Completion time of the chapter test, lab exam, midterm, and final exam is called, all must be turned in and class resumes.

2. Please be present for each class meeting. It is crucial for understanding to be successful. Some class meetings there will be activities that will Count as extra points. Five to eight points can be earned before and are added to a chapter test and/or lab exam they precede. Once the points are used, more must be earned for the next Chapter test and/or lab exam. Extra points are not made up, So if you are absent or out of the classroom during extra point activities, you do not get them. No extra points will be added to midterm and final exams.

3. All assignments should be graded and handed back in a timely manner by the instructor. The Students will review the assignments and ask any questions necessary. The student will then initial the assignment and turn it back to the instructor for filing purposes. If the student is absent, , he/she needs to be prepared to come by the instructor's office or reserve time after class to review and initial the assignment.

4. It is the student's responsibility to get all notes and any additions to notes done in class when he/she is absent. THE INSTRUCTOR WILL NOT PROVIDE NOTES FROM CLASS BY PHONE OR BY EMAIL. The student must get with someone else in the class or see the instructor during office hours to review power points or notes.

5. Remediations will be provided for each chapter test and lab exam. They are not mandatory but optional. The purpose of these is to help students remediate what was missed on the chapter test and/or lab exam. The remediation sheet includes questions or statements for the student to complete on a separate piece of paper, staple this separate piece of paper to the remediation sheet, and turn in both by the deadline indicated at the top of the remediation sheet. BOTH MUST BE RECEIVED BY THE DEADLINE DATE AT TOP OF THE REMEDIATION SHEET OR BOTH WILL NOT BE ACCEPTED AND THE ORIGINAL TEST GRADE STANDS. For each statement or question assigned to the student that is answered correctly, the student will earn a half point. The half points are added up and added to the test grade made. The student will only answer assigned statements/questions from the remediation sheet. These assigned statements/questions will be circled for the student on the remediation sheet. REMEDIATION SHEETS AND ANSWERS SHOULD BE PLACED IN THE INSTRUCTOR'S HAND; THEY CAN'T BE FAXED, MAILED, TEXTED, EMAILED, OR PUT IN INSTRUCTOR'S MAILBOX, DOOR BOX, OR SLID UNDER THE INSTRUCTOR'S OFFICE DOOR. PLEASE LET

THE INSTRUCTOR KNOW AHEAD OF TIME IF YOU ARE SENDING REMEDIATION SHEETS AND ANSWERS BY ANOTHER STUDENT.

6. No grades on any graded assignments associated with the class will be dropped. There are five mini-projects that a student can participate for extra daily work grades to make average better, but the student must be serious about doing them because these grades will count and there are deadlines and guidelines for these mini-projects. (SEE GUIDELINES ATTACHED IF YOU PLAN TO DO THEM AND GET EXTRA GRADES TO ADD TODAILY WORKGRADES.)

7. Please ask the instructor about tape recording devices, unless you have a documented disability and the ADA representative has met with you and the instructor about using one. Cell phones should be silenced or turned off and placed away during class. If a student needs to use his/her Cell phone during class, he/she may take cell phone and exit classroom to use the cell phone. The student is responsible for anything missed while out of the classroom. NO ELECTRONIC DEVICES OF ANY KIND SHOULD BE OUT OR VISIBLE DURING TESTS OR EXAMS UNLESS PROVIDED BY THE INSTRUCTOR OR SUPPORTED BY A DOCUMENTED DISABILITY REPORT FROM A DA REPRESENTATIVE

8. This is a College environment, but respect is still expected among everyone. Please be careful what you say out loud and in a crowd. If you find at any time a conflict arises, please notify the instructor. Examples of conflicts include problems with other students, problems with Content or subject matter, direct problems with the instructor or others that help you on the campus. I hope that in any of these circumstances you can feel Comfortable enough to come to me and discuss the matter.

9. End of the semester averages will be rounded to the nearest whole number. The student may receive decimal grades on assignments throughout the class, such as 75.50, but at the end of the semester, the student's overall average will be rounded to the nearest whole number. It is important to learn information as you go and not "cram" science concepts.

10. Please see the instructor during office hours if you have trouble figuring your average. The instructor will provide progress reports at midterm. Please let the instructor know if you are thinking about withdrawing because withdrawing could affect financial aid and to double check your figures with the instructor on your average. You could be passing. (SEE ATTENDANCE

11. No early chapter tests, lab exams, laboratory exercises, midterm exam, and final exam will be given early unless a doctor's appointment card is shown or another type of professional document, such as a work schedule or court dated paperwork, is provided

12. All missed assignments, remember, have deadline dates. There should be none being made up during the week of the final exam.

13. If you are late for class, please enter quietly without disturbing the others around you, especially if testing is in progress.

14. The midterm exam will be given a week before, a week after, or during the week of March 6, 2018. All material covered before the scheduled midterm will be included on the midterm exam. Any material covered after the midterm exam will be included on the final exam.

XIV. ATTENDANCE

a. Students are expected to attend all classes for which they are registered. Students who are unable to attend class regularly, regardless of the reason or circumstance, should withdraw from that class before poor attendance interferes with the student's ability to achieve the objectives required in the course. Withdrawal from class can affect eligibility for federal financial aid. Withdrawal from class can prohibit progression in nursing and allied health programs. SEE THE INSTRUCTOR AS SOON AS A WITHDRAWAL IS CONSIDERED. THIS WITHDRAWAL WILL BE CONSIDERED OFFICIAL AND STUDENT MUST SIGN THE WITHDRAWAL SLIP TO MAKE IT OFFICIAL. NO WITHDRAWALS OVER PHONE WILL BE ACCEPTED THE STUDENT CAN WRITE A LETTER, EMAIL, OR SEE INSTRUCTOR IN PERSON TO WITHDRAW.

b. NO MORE THAN 3 ABSENCES FOR A SPRING TERM, SCIENCE CLASS ARE ACCEPTABLE FOR SUCCESS IN THE CLASS. NO MORE THAN 6 TARDIES, LATE TO CLASS OR LEAVING EARLY FROM CLASS, ARE ACCEPTABLE FOR SUCCESS IN THE CLASS. AFTER THE 3RD CONSECUTIVE ABSENCE WITHOUT A CALL OR EMAIL FROM THE STUDENT, THE INSTRUCTOR WILL FILL OUT AN UNOFFICIAL WITHDRAWAL SLIP AND STUDENT WILL BE WITHDRAWN FROM THE BIOLOGY CLASS AND CAN'T ATTEND ANYMORE CLASS MEETINGS FOR THAT CLASS THAT SEMESTER. THE STUDENT WILL RECEIVE A GRADE OF "W" FOR THAT SCIENCE CLASS. THE STUDENT WILL ALSO BE RESPONSIBLE FOR ANY REPAYMENT OF UNEARNED FINANCIAL AID DUE TO THIS UNOFFICIAL WITHDRAWAL.

c. A STUDENT MAY NOT OFFICIALLY WITHDRAW FROM A SCIENCE CLASS AFTER HE/SHE TAKES THE FINALEXAM. ALL OFFICIAL WITHDRAWALS MUST BE DONE BEFORE THE STUDENT SITS DOWN TO TAKE THE FINALEXAMS SCHEDULED IN SCIENCE. ONCE THE FINALEXAM IS HANDED TO THE STUDENT OR PUT ON THE STUDENT'S DESK, HE/SHE CANNOT OFFICIALLY WITHDRAW. THE INSTRUCTOR WILL NOT TURN ANY UNOFFICIAL WITHDRAWALS IN WHEN THE WEEK OF FINALEXAMS APPROACHES. IF THAT STUDENT HAS NOT GONE THROUGH THE OFFICIAL WITHDRAWAL PROCESS AND IS FAILING, AT THAT POINT, HE/SHE WILL RECEIVE THE FAILING GRADE. STUDENT SERVICES ALSO WILL HAVE A DEADLINE DATE AS WELL, WHICH IS APRIL 27, 2018.

XV. STATEMENT ON DISCRIMINATION/HARASSMENT

The College and the Alabama Board of Education are committed to providing both employment and educational environments free of harassment or discrimination related to an individual's race, color, gender, religion, national origin, age, or disability. Such harassment is a violation of State Board of Education policy. Any practice or behavior that constitutes harassment is a violation of

State Board of Education policy. Any practice or behavior that constitutes harassment or discrimination will not be tolerated.

XVI. AMERICANS WITH DISABILITIES

The Rehabilitation Act of 1973 (Section 504) and the American with Disabilities Act of 1990 state that qualified students with disabilities who meet the essential functions and academic requirements are entitled to reasonable accommodations. It is the student's responsibility to provide appropriate disability documentation to the College. Please contact Dr. Purifoy at tpurifoy@rstc.edu or extension 151.

**XVII. COURSE CALENDAR
PHS 111D**

- WEEK 1 Go over Syllabus and start topic 1
- WEEK 2 Finish topic 1; scenario lab; begin topic 2
- WEEK 3 Finish topic 2; scenario lab using items in motion; do topic 3
- WEEK 4 **Exam 1 (topics 1-3)**; topics 4, 5, and 6; structure and bonding lab
- WEEK 5 Topics 7 and 8; lab on developing solutions, mixtures, and colloids
- WEEK 6 **Lab exam 1 on topics 1-8**; discuss topic 9; lab on acids and bases
- WEEK 7 **Midterm exam (topics 1-9)**
- WEEK 8 Topic 10; lab performing all different types of waves and virtual lab on sound waves
- WEEK 9 Begin topic 11; virtual lab on electricity and magnetism
- WEEK 10 Finish topic 11; design electrical currents/circuits
- WEEK 11 **Exam 2 on topics 10 and 11**; topic 12
- WEEK 12 Topics 13 and 14; lab on identifying rocks
- WEEK13 **Exam 3 on topics 12-14**; begin topic 15; constellation lab
- WEEK 14 **Lab exam 2 on identifying rocks and constellations**; finish topic 15
- WEEK 15 FINAL EXAM on topics 10-15**

THIS IS A TENTATIVE SCHEDULE. ACTIVITIES AND CONTENT COVERED MAY CHANGE IF NECESSARY; HOWEVER, THE STUDENT WILL BE NOTIFIED AT LEAST ONE WEEK IN ADVANCE OF ANY CHANGES.

XVIII. GUIDELINES FOR PHENOMA-HAPPENING PROJECTS

YOU WILL RECEIVE ARTICLES ON THREE PHENOMENA THAT HAPPENED ALMOST 5 YEARS AGO. FOR EACH PHENOMENA ARTICLE THE GUIDELINES ARE:

1. On a separate piece of paper, answer the following questions:
 - a. What topic or topics we discussed does the phenomenon involve? (1 point)
 - b. Tell where the phenomenon occurred and briefly describe it? (2 points)
 - c. How did living things respond to the phenomenon? (1 point)
 - d. What does the article suggest caused the phenomenon? (1 point)

You will write the answers to the questions in paragraph form on a piece of notebook paper, or you can type the answers and print them on copier paper.

2. Questions must be answered in complete sentences. Here are the points earned for this Section:

5 points for none to one incomplete sentence, 4 points for two incomplete sentences, 3 points for three incomplete sentences, 2 points for four incomplete sentences, 1 point for five or more incomplete sentences, and 0 points if all sentences are incomplete.

3. Grammar within the sentences must also be correct. Here are the points earned for this section:

5 points for none to two grammatical errors, 4 points for three to four grammatical errors, 3 points for five to six grammatical errors, 2 points for six to seven grammatical errors, 1 point for eight to ten grammatical errors, and 0 points for more than ten grammatical errors.

4. A short bibliography of the article should appear at the bottom of each of your papers. So, you must write the name, date, author, and source of the article. Here are the points earned for this section: 5 points for full bibliography, 4 points for three components of bibliography listed, 3 points if two components of the bibliography listed, 2 points if only one component of the bibliography is listed, and 0 points if there are none of the components of the bibliography listed at all.

5. The total points to achieve on each paper are 20 points. The grade is figured by dividing the number of points earned by 20 and multiply by 100. These phenomena projects will count as a daily grade.

- 6.. These extra graded mini-projects must be turned in the week of April 9, 2018, or they will not be graded and used. You may turn them in as you do them, but none will be accepted after the week of April 9, 2018.

8. Each phenomena project will be one page or less, depending on the size of the writing or typing and the spacing used. Just be sure you follow all guidelines and reach the maximum amount of points in each section.

9. If you need help, please let the instructor know in a timely manner because the deadline date in number 7 will be enforced.

10. You may email each finished project, but be please be sure if the instructor did not respond that it was received, note it is your responsibility to get it to the instructor another way. It is best to hand-deliver your finished paper or papers.

XIX. STUDENT ACKNOWLEDGEMENT FORM

This is to verify that I have received a copy of my PHS 111D syllabus and understand the content therein. I agree to abide by all rules and policies set forth in this syllabus and by the College.

This is a tentative syllabus. the instructor has the right to alter any material listed in this syllabus, but will announce any changes to students at least one week in advance of the change.

Student Printed Name: _____

Student Signature: _____

Email address: _____

Date.: _____

Working phone number: _____