

Instructor:

Dr. Howard L. Richards

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Office: Science 105

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Office hours: By appointment. We'll be seeing a lot of each other (4 hours on a typical day) over these few weeks, but if you need to talk to me in person outside class or the lab, just mention it in class/lab or send me an email. **Please don't hesitate to do this! I am on your side** and want to help you earn a good grade; I will NOT bite your head off!

Textbook:

Conceptual Physical Science 5 th edition, by Paul G. Hewitt, John A. Suchocki, and Leslie A. Hewitt (Pearson 2012, ISBN: 978-0321753342)

Catalog Description:

110 General Physical Science. 3 hrs. I, S.

Course covers the basic principles of chemistry, applications of chemistry, and an introduction to earth science. Atomic theory, chemical reactions and structure, everyday chemicals, and basic concepts of geology are studied. (PR: MTH 121, or MTH 121H, or MTH 123, or MTH 127, or MTH 130, or MTH 130H, or MTH 130E, or MTH 140, or MTH 203, or MTH 220, or MTH 225, or MTH 229, or MTH 229H; CR: PS 110L)

Grades:

A ≥ 90 > B ≥ 80 > C ≥ 70 > D ≥ 60 > F

Test 1 = 22%

Documentary Review #1 = 4%

Test 2 = 22%

Documentary Review #2 = 5%

Final Exam = 31%

Documentary Review #3 = 6%

Online Homework = 10%

General Description:

PS 110 is half of a 2-semester survey of Physical Science, satisfying Core II Natural Science; it forms 1/3 of science content for K-6 Education majors. We'll describe how atoms are made up of electrons, protons, and neutrons; how compounds are made up of atoms; and how substances are made up of one or more compounds. We'll explain how electrons determine which atoms react with which others, how vigorously they react, which substances will dissolve in which others, and other physical and chemical properties. We'll explain how weathering, plate tectonics, and volcanic activity have created the rocks and shaped the landforms we see around us. Physical and chemical models will illustrate Arithmetic concepts; especially addition, multiplication, division, factoring. Quantity names will be abbreviated so that key statements about them can be written in concise unambiguous forms, to be manipulated via algebra, and drawn on graphs.

Exams:

The course divides into two main units: chemistry and earth sciences. Test 1 will cover most of chemistry; Test 2 will cover the rest of chemistry and geology; and the final exam will be comprehensive, but will concentrate on the second half of the earth sciences unit. Tests 1-3 are each worth 19% of the course grade; the final exam is worth 28% of the course grade.

Documentary Reviews:

There are other forms of information about science that may be more detailed, more up-to-date, and/or more appealing than textbooks, and these may help some students learn (and possibly later teach) the material more effectively. In order to familiarize the students with this material, each student will be assigned 3 documentaries to review. The reviews should be accompanied by PowerPoint slides and uploaded to the class MUOnline web page. The reviews will be graded as shown below.

Summarize the documentary, making sure to list its main points.	30%
What points were confirmed in your textbook? Which threw more light on the other – the textbook on the documentary, or the documentary on the textbook?	15%
What points (if any) contradict what you find in your textbook? If the video contradicts your textbook, were you able to find independent sources that back up one or the other? If so, what were the sources, and what was your conclusion? If there were no contradictions, where did the documentary go into more detail than the textbook?	15%
What surprised you the most?	10%
Would you recommend this to a fellow university student (not a science major) who is somewhat interested in science? Why or why not?	10%
Would this video be helpful in sparking an interest in science in a COLLEGE student who is mostly indifferent? If not, what could be done to make it more interesting to this student?	10%
Would this video be helpful in sparking an interest in science in a MIDDLE SCHOOL student who is mostly indifferent? If not, what could be done to make it more interesting to this student?	10%

Course Learning Objectives:

Students will ...	Practiced by ...	Assessed through ...
Apply the principles of physical science to choose the correct description or outcome of physical situations.	Study Guides	Exams
Correctly identify the definitions of technical terms used in physical science.	Study Guides	
Solve physical science problems through a sequence of reasonable steps.	Homework, Study Guides	

Final Exam is Required:

From the *Undergraduate Catalog*: “Students are required to take all regular examinations. If a student attends a course throughout the semester and is absent from the final examination without permission, the instructor counts the examination as zero and reports the final grade of *F*. If the absence is the result of illness or some other valid reason beyond a student's control, the instructor reports a grade of *I*. In all cases, the student must verify the reason for the absence.”

Homework:

To access the online homework, go to www.masteringphysics.com and use the access key that came with your textbook. If you have a used book or ordered the book online, you can buy an access key directly from the Mastering Physics website. The code for this course is **PS110SUMMER2015RICHARDS**.

Academic Dishonesty:

“Academic Dishonesty is something that will not be tolerated as these actions are fundamentally opposed to ‘assuring the integrity of the curriculum through the maintenance of rigorous standards and high expectations for student learning and performance’ as described in Marshall University’s Statement of Philosophy.” Cheating and other forms of academic dishonesty will bring serious sanctions, including possible expulsion, as described in the *Undergraduate Catalog*.

Cheating will result in being reported to
the Dean of Students and, at minimum, either
(a) having all suspect work marked wrong or
(b) having the course grade reduced by one letter grade,
whichever is the heavier penalty.

You may work together on homework – in fact, that is highly recommended – but do not just copy someone else's answers. That would be dishonest. Make sure you contribute and understand how to work the problems.

Policy for Students with Disabilities:

Marshall University is committed to equal opportunity in education for all students, including those with physical, learning and psychological disabilities. University policy states that it is the responsibility of students with disabilities to contact the Office of Disabled Student Services (DSS) in Prichard Hall 117, phone 304 696-2271, to provide documentation of their disabilities. Following this, the DSS Coordinator will send a letter to each of the student’s instructors outlining the academic accommodation he/she will need to ensure equality in classroom experiences, outside assignment, testing and grading. The instructor and student will meet to discuss how the accommodation(s) requested will be provided. For more information, please visit <http://www.marshall.edu/disabled> or contact the Disabled Student Services Office.

Students with Medical Conditions that May Require Response or Accommodation:

In addition to the above, students with medical conditions, temporary or permanent, that may require special attention (for example, epilepsy) or accommodation should inform the instructor as soon as possible.

Your privacy will be respected.

University Policies:

By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy by going to www.marshall.edu/academic-affairs and clicking on “Marshall University Policies.” Or, you can access the policies directly by going to http://www.marshall.edu/academic-affairs/?page_id=802.

- Academic Dishonesty
- Excused Absence Policy for Undergraduates
- Computing Services Acceptable Use
- Inclement Weather
- Dead Week
- Students with Disabilities
- Academic Forgiveness
- Academic Probation and Suspension
- Academic Rights and Responsibilities of Students
- Affirmative Action
- Sexual Harassment

Classroom Behavior:

Disorderly conduct that interferes with the normal classroom atmosphere will not be tolerated. The classroom instructor is the judge of such behavior and may instruct a disorderly student to leave the room with an unexcused absence. More serious misconduct may result in a complaint to the Office of Judicial Affairs. “Official University action will be taken when a student’s or student group’s behavior violates community standards, interferes either with the University’s educational purpose, or with its duty to protect and preserve individual health, welfare, and property. When the behavior is aggravated or presents a continuing danger to the University community, accused students are subject to separation from the institution.”

As a rule, **no food or drink** is allowed in the classroom. This is not always rigorously enforced, but certainly **it is never permissible to leave a mess**, whether crumbs or empty bottles, nor to distract the students around you. You are a grown-up, so act like one and be considerate.

Along the same lines, **all cell phones must be turned off or set to vibrate only** before the beginning of class. Any student who takes a call must leave the classroom to do so. Phone calls may not be placed or received during quizzes or tests. No devices may be used to play games or watch videos unrelated to classroom discussions.

You may not use your phone as a calculator during tests, nor any other tablet or device capable of sending or receiving text, emails, video, or phone messages. You can get a very good scientific calculator (e.g., Casio fx-300ES PLUS) for less than \$20; I recommend choosing one with two-line display (so you can check for typos in your input) and at least 3 memory locations (usually named A, B, C, ...) in which you can store intermediate results to avoid rounding error. Of course, if some other department required you to buy an unnecessarily expensive graphing calculator, you can use that, too.

Please **do ask questions** if you do not understand a concept, derivation, or calculation. Do not be embarrassed to ask; if you have a question, others probably have the same question! Let me know if I am going too fast or too slow. Private chats with other students, on the other hand, must be kept to an absolute minimum during class time; they are very distracting.

TENTATIVE SCHEDULE (SUBJECT TO CHANGE)

July 13, Monday, 8 a.m. - 5 p.m.
Regular Registration

July 14, Tuesday
First Day of Classes
Late Registration/Schedule Adjustment (add/drop) Closes

July 15, Wednesday
"W" Withdrawal Period Begins

July 17, Friday
Application for August Graduation Due in Academic Dean's Office
Final Draft of Thesis/Dissertation Delivered to Committee Chair
Documentary Reviews:
Butcher, Emily M.
Cooney, Joshua H.
Edwards, Travis L.

July 20, Monday
Documentary Reviews:
Hanks, Lindsey C.
Harris, Jordan S.
Kitchen, Jerry L.

July 21, Tuesday
Documentary Reviews:
Marshall, Rachel A.
Oxley, Katherine L.
Parent, Daniella N.

July 22, Wednesday
Documentary Reviews:
Spaulding, Amanda L.
Turley, Megan R.

July 23, Thursday
TEST 1

July 27, Monday
Documentary Reviews:
Butcher, Emily M.
Cooney, Joshua H.
Edwards, Travis L.

PS 110: General Physical Science II Summer 2015

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M-F 11-12:50 Sci Room 277 6

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July 28, Tuesday

Documentary Reviews:

Hanks, Lindsey C.

Harris, Jordan S.

Kitchen, Jerry L.

July 29, Wednesday

Documentary Reviews:

Marshall, Rachel A.

Oxley, Katherine L.

Parent, Daniella N.

July 30, Thursday

Documentary Reviews:

Spaulding, Amanda L.

Turley, Megan R.

July 31, Friday

Last Day to Drop an Individual Course

August 3, Monday -- August 13, Thursday

Complete Withdrawals Only

August 2, Tuesday

TEST 2

August 6, Thursday

Documentary Reviews:

Butcher, Emily M.

Cooney, Joshua H.

Edwards, Travis L.

August 7, Friday

Documentary Reviews:

Hanks, Lindsey C.

Harris, Jordan S.

Kitchen, Jerry L.

August 10, Monday

Documentary Reviews:

Marshall, Rachel A.

Oxley, Katherine L.

Parent, Daniella N.

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August 11, Tuesday

Documentary Reviews:

Spaulding, Amanda L.

Turley, Megan R.

August 13, Thursday

Last Class Day

Last Day to Completely Withdraw from Summer III

August 13, Thursday

Approved Thesis/Dissertation must be submitted to the EDT website

Electronic Thesis and Dissertation form and graduation fee receipt submitted to the Graduate College Office

August 14, Friday

Official August Graduation Date

FINAL EXAM

All online homework due at 11:55 p.m.

August 17, Monday, Noon

Deadline for Submitting Final Grades