

SYLLABUS
Natural Science NTSC 1110-Physical Science
SPRING 2024

Instructor: Chuck Schick

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Office Hours: Mon. 3 to 4 PM and Thurs. 2-3 PM Rm 111 Health Sciences

Class Time: Monday. 4:30 to 5:45 pm. Lab Thursday 6 to 8 pm

SCHEDULE

| WEEK | Week of | TOPICS |
|------|---------|---|
| 1 | Jan 15 | Class Introduction Measurement systems The worksheet review (together and on your own) Lab#1 Observation lab. |
| 2 | Jan 22 | Motion, laws and patterns. LAB #2 Data Collection measurement, modeling lab Periodic table quiz #1 |
| 3 | Jan 29 | Motion, laws and Patterns Motion Lab #3 Periodic Table Quiz #2 |
| 4 | Feb 5 | Motion, laws and Patterns Lab #4 Gravity Laboratory |
| 5 | Feb 12 | WORK and POWER Lab #5 HORSEPOWER LABORATORY Test #1 Review Periodic Table quiz #3 |
| 6 | Feb 19 | TEST #1. Heat and Temperature, thermodynamics Lab #6 Projectile Motion Laboratory Take home materials for density lab #7 Present assignment #1- Article presentation |
| 7 | Feb 26 | Heat and Temperature Outline for RESEARCH PROJECT Due (1 page outline with 4 references. Due last class of week) Periodic table quiz #4 LAB #7 DENSITY LAB Part 1 (aka build your own balloon) |
| 8 | Mar 4 | Energy and Work Lab #8 Density Lab part 2 |
| 9 | Mar 11 | Sound, Light and Electricity Lab #9 Weights and measures technique Periodic table quiz #5 |
| 10 | Mar 18 | Heat and Temperature LAB # 10 Phase Change Lab Periodic table quiz #6 Test #2 Review |
| 11 | Mar 25 | TEST #2 (first class of the week) LAB: Present Assignment #2 SOUND LAB Periodic Table and ionization states of elements |
| 12 | Apr 1 | Periodic Table and ionization states of elements Elements and Basic Chemistry LAB #11 Basic Mineral properties due to chemistry (hardness, x-stal habit, luster, color, etc.) |

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| 13 | Apr 8 | Elements and Basic Chemistry Acid-Base Reactions Balancing equations LAB #12 Fun with dynamic acid base reactions |
| 14 | Apr 15 | Balancing Equations Research Projects ARE DUE Test #3 review Take Home Lab #13 TBD |
| 15 | Apr 22 | TEST #3 (second class of the week) Lab #14 What did you learn? Wrap up Lab Summary Make sure any outstanding labs are submitted |
| 16 | Apr 29 | Presentations of papers or power points Final Exam Review NO LAB |

Course Textbook: Tillery, B. W. PHYSICAL SCIENCE, 11th Ed. Pub. McGraw Hill (or whatever the bookstore is selling). Any edition is OK if you can't afford the most current one. **Just get one!!**

Please obtain and bring to lab class a pair of **SAFETY GLASSES or GOGGLES**. Also **GET A CALCULATOR**. A simple one that can do scientific notation.

Assignments: There are three (3) assignments in the schedule. Each is designed to permit the student to explore other sources of information (that means not just the class textbook) and prepare either a presentation or visual aid to be used in the classroom to enforce the material being presented. Each assignment is explained below:

#1 ARTICLE/NEWS ITEM- Find, READ and UNDERSTAND an article from a local paper, national newspaper, magazine or periodical that is related to physical science (astronomy, energy, physics, chemistry, geology, electricity, light, heat, etc.) but not biology or the environment. Prepare a 1-to-2-page summary of the article. Get more information if necessary, by consulting other sources. Learn the pronunciation of key words. You will then present your article and summary to the entire class. You will be graded on both the summary and your presentation. Please include a citation for your article.

#2 SOUND LAB- Use simple materials to prepare a lab for your future students involving sound and the science of sound. Wave motion should or can be incorporated into your laboratory. Look for ideas in textbooks (mid and elementary school) and the web. Show your creative side. The lab should have a materials list, objectives, directions and evaluation of students work (assessment). You need references (at least one). You will present the lab, preferably with the materials to OUR ENTIRE CLASS. We will try the lab out in class.

RESEARCH PROJECT (and Presentation)

During this class we will be covering several topics but not all. The purpose of the paper is to permit you to explore a subject that interests you in greater detail. You will write a paper (10 to 12 pages double-spaced) or create a presentation (such as Power Point, multi-media, video etc.) containing audio text and visual content. Be creative. This is a chance to incorporate other skills into your project. You will turn in a 1-page summary or your topic (with an outline) and **WITH REFERNCES** for your paper on the date specified in the syllabus. Turn the final product in ON TIME. Late penalties will occur. **WIKAPEDIA, ENCARTA or any online encyclopedia) is not considered a REFERNCE.**

Make-up Tests:

No Make-up Exams. See Grading Policy below.

Grading Policy: Approximate

There are Three (3) Tests and a FINAL Examination for a grand total of four (4). These tests count for 60% of your grade. You may drop the lowest test score (Best 3 out of 4 Exams). The research paper will be 15% of your grade. The two (2) Assignments will count for 10%. Homework is worth 10%. Labs are also part of your grade. Poor attendance could RESULT IN YOU BEING DROPPED from the class.

Attendance: The school policy will be followed. Therefore, not showing up for class could result in the “system” dropping you from the class. You should attend class regularly and get your notes. I don't give out notes. Part of your education is to process lecture material and put it into your own notes. If you are not going to attend class, please let me know **BEFORE CLASS**. **Lack of attendance will most likely reflect poorly on your final grade.**

COVID 19 ISSUES:

NONE. But please, if you are truly sick and contagious with anything, don't come to class and pass it on to your classmates (and instructor 😊). Be respectful of your fellow classmates.

Title IX:

[Note: UNM encourages all faculty and TAs to include a Title IX statement on the syllabus and reminds all faculty, TAs, and GAs that per university policy APPM 2740 they are mandatory reporters to the Title IX Coordinator at the Office of Equal Opportunity of reports of gender discrimination, including sexual harassment, sexual misconduct and sexual violence. Information about how to have a conversation with a student about reporting and what steps to take is available on the [Title IX Coordinator page](#). Faculty may be interested in informational resources developed by a group of UNM faculty, Faculty SAFE.]

Accommodations: UNM is committed to providing equitable access to learning opportunities for students with documented disabilities. As your instructor, it is my objective to facilitate an inclusive classroom setting, in which students have full access and opportunity to participate. To engage in a confidential conversation about the process for requesting reasonable accommodations for this class and/or program, please contact Accessibility Resource Center at arcsrvs@unm.edu or by phone at 505-277-3506.

On the UNM Valencia Campus, the coordinator for accommodations is located in the guidance center. After you see them, they will confidentially, let me know what accommodations you will require.

Electronic Devices:

To the benefit of you, your classmates and the learning environment **please turn off** electronic devices such as cell phones before class begins. If you wish to use a **laptop or tablet** for note-taking **please press mute** to eliminate distracting noises. Your cooperation in these matters is appreciated by all.

Title IX: See <http://www2.ed.gov/about/offices/list/ocr/docs/> for information regarding these rules for a safe classroom for both students and teachers. Also, the Office of Equal Opportunity (oce.unm.edu) provides more information regarding these matters.

KEEP A COPY OF THE SYLLABUS

It is a great way to look ahead and see what's going to be discussed. And the best way to read before class and be prepared for any pop quizzes.

NOTE: This schedule is an outline of what is anticipated to be covered this semester. The dates and topics are subject to change if needed. Changes will be related to you ASAP in class.

Tutoring Services

Not sure if you'll need this for our class but the university has asked me to include it. Here is a link to the tutor service on campus if you feel you need more help. The second link is for making an appointment

<https://valencia.unm.edu/campus-resources/the-learning-center/learning-center.html>

<https://esurvey.unm.edu/opinio/s?s=131505>