

PSC 1050—Color, Light, and Sound
Three Semester Hours

CB
04/13

PREREQUISITES:

None. WARNING: not PSC 1051

COURSE OVERVIEW:

Designed for non-science majors. Physical nature of light and sound including transmission, absorption, reflection, interference, and resonance. Applications include analysis of musical instruments, acoustics, optical systems, perception of color and sound.

METHODS OF COURSE INSTRUCTION:

All material for this course is print-based. Instructor and students communicate and exchange materials through postal mail.

E-PRINT OPTION:

In this course, an option exists to use e-mail to submit your lesson assignments. Your assignment will be returned to you either as an e-mail attachment or as a hard copy sent through the postal mail, depending on the preferences of the instructor and/or program.

TEXTBOOKS AND SUPPLIES:

Baker, Clyde and Karen. *Color, Light, and Sound*. 2nd ed. The Plains, OH: Foxfyre, 1988. [ISBN: 112602001]

NUMBER OF LESSONS:

The course has 12 lessons, including one midcourse examination and one final examination. These lessons include:

- Lesson 1: Units and General Physics Concepts
- Lesson 2: Waves
- Lesson 3: Sound
- Lesson 4: Music
- Lesson 5: Acoustics and Sample Midcourse Examination
- Lesson 6: Midcourse Examination Preparation
- Lesson 7: Light: Part I
- Lesson 8: Light: Part II
- Lesson 9: Color Theory
- Lesson 10: Color Psychology
- Lesson 11: Color Application and Sample Final Examination
- Lesson 12: Final Examination Preparation

TYPES OF WRITING ASSIGNMENTS:

You will submit two types of written answers for each lesson in this course. The first type is found in the textbook at the end of each chapter.

These questions are primarily short-answer, but also contain some numerical calculations. Answering these should give you a good idea of what I think is important in each chapter. Consider this material as **homework** that is to be completed and turned in with each lesson.

I will check your homework for completeness and content. If you have difficulty with any questions and you would like me to comment further or explain certain points, please mark those answers with a question mark (?) in the right margin and a brief note indicating what particular thing seems to be giving you trouble. Note that the answers to any numerical calculations (problems) are given to you for the course manual problems so that you can check your work yourself before sending it in. If you give a problem a good hard try but still can't get my answer, send in your work anyway so that I can see where you went wrong and make some helpful suggestions. Do not just send in a blank space for a problem, or I cannot help you through the solution. Just showing you the correct method is not nearly as helpful to most students in the long run as being shown where their own reasoning was faulty.

Sending in the completed homework will give you up to 25 points for that lesson, even if I have had to make some helpful comments or corrections on your answers. If you skip questions or do not complete this homework, your overall grade for the course will suffer. These homework assignments are a required part of this course.

The second part of your written assignment will be a set of 25 multiple-choice questions, which I will grade. In general, these questions will pertain to the same material covered by the homework questions and should be considered as a **take-home** multiple-choice assignment covering the chapter. Twenty-five points are possible on each set of multiple-choice questions, so that you can earn up to 50 points for each complete submitted lesson.

GRADING CRITERIA:

Your final grade will be based on the average percentage score for your written lessons combined with your percentage scores on the midcourse and final examinations. The sum of these three scores will be divided by three to determine your overall percentage score, and a letter grade will be assigned.