

Course Information, Phy 341 Pseudoscience

IMPORTANT * VITAL * IMPORTANT * VITAL * IMPORTANT!!!!

BASIS OF PHYSICS 341, PSEUDOSCIENCE, COURSE GRADE:

- (1) Performance on homework assignments 50% of course grade;
- (2) Performance on book reviews 40% of course grade;
- (3) *Class participation and attendance* 10% of course grade.

HOMEWORK: *Students must complete ALL assigned homework.* There are no optional assignments. Incomplete or missing homework can result in a final grade of X (at best) or F (usually) for the course. Homework cannot be submitted by e-mail, fax or any other electronic means. Homework must be turned in on the stated due date, in class, in legible print form, in the usual homework box, or before class, directly to the instructor. The due date is always given on the assignment. It is your responsibility to be in class, to pick up the assignment when it is handed out, and to turn it in when due. *The concept of "late homework" does not exist.* If you miss a homework assignment for some genuinely unavoidable reason (unexpected severe illness, etc.) *you should see the instructor as soon as possible, NOT AT THE END OF THE SEMESTER, to present your valid excuse and to obtain a special makeup project.* It is a very good idea to make a *xerox copy* of any assignment you turn in in this course. If the copy is as legible or more legible than the original, you can turn in the copy and keep the original. Graded homework will be returned as promptly as possible. [It takes a long time to grade homework in a course like this, because the grader must read and compare an overwhelming amount of material. You can make the grader's job a lot easier by word-processing or very neatly hand-printing your assignment, making sure it is legible, and making sure all pages are *numbered and IN ORDER.*] It is your responsibility to collect your graded assignments and to keep track of how you are doing in the course. If you have questions about grading of a specific assignment, you can consult the graders face-to-face during their office hours, to be announced.

HINTS ON HOMEWORK: The assignments often require a good deal of work. Generally you have roughly two weeks between the time the assignment is handed out and the time it is due. *You will usually need all this time, working some reasonable amount of each day! Do not try to do the assignment the night before it is due; the result will inevitably be "D" or "F".* Assignments often have several parts! Make sure you give equal attention to all the various parts. Doing a given part of the homework may require that you do *research*. Idly surfing the Internet does *not* constitute doing research.

BOOK REVIEWS: *During the semester, each student is required to write two full-length reviews of typical pseudoscience books.* Each review must be not just of a different book, *but of a different topic.* For instance, you might review a book on astrology and a book on creationism, but not two books on astrology. It is your responsibility to choose books for review. However, you must get the instructor's approval for each of the specific books you choose. If you receive a low grade on Review #1 you may want to consult with the instructor in detail about what you are doing wrong, to make sure you perform better on your second review.

REVIEW CRITERIA: The following considerations are important in your determination of which books are appropriate for review, and in understanding what is expected and how reviews are to be evaluated.

- *The book should be a pseudoscience book aimed at the general public, rather than at experts.* Such books are full of obvious errors and flaws, making your reviewing job much easier.
- *The book must be approved by the instructor.* This is unfortunately necessary since some clueless students confusedly pick science fiction novels, science popularizations or even reference works from the course bibliography for review!!
- *The review should be analytical and critical, but not polemical.* If you say the equivalent of “this book is worthless and the author is a moron,” your review is also worthless. We don’t want your unsupported opinion, we want the facts! Read the book carefully, quote from it, point out specific examples of factual error, flaws of argumentation, invalid evidence, etc. Refer frequently to the detailed discussions of argumentative fallacies provided by J. C. Smith in *Pseudoscience and Extraordinary Claims of the Paranormal*. By quick research (often as simple as consulting a reliable encyclopedia) you can easily establish the actual facts or background of specific topics treated in your book. In general, you are expected to *evaluate* the book using objective standards. Note that *the reference material listed in the course bibliography under a particular topic is extremely important. You will almost always need to refer to several of the books and articles listed in the bibliography in the course of writing your review, unless you already happen to be an expert on the topic of the pseudoscience book under review.* A good way to make a “D” or “F” is to try to write the review “off the top of your head,” without any research or any help from reference material. By the way, “surfing the net aimlessly” does not constitute research. Unless a website is associated with an educational institution it is very unlikely to contain accurate information about anything. For example, the notorious Wikipedia is not a valid reference under nearly any circumstance.
- *The length of your review is up to you.* It need only be long enough to “get the job done well.” However, a 1 or 2 page review invariably earns an “F”, simply because you can’t even outline a book of normal length in 2 pages, much less review it. Get serious!
- *Evaluated reviews will be returned as promptly as possible. Be sure to make and keep a xerox copy of each review before you turn it in.* It is your responsibility to recover your graded review in class, when it is made available. Reviews left unclaimed, like homework left unclaimed, tend to vanish.
- *There is a deadline for each review.* No review will be accepted after the deadline has passed. However, the reviews can be turned in *at any time before the deadline.* It is not possible to “make up” a missed review, in any way. Note this well!
- A good way to make “D” or lower on a review is to base it entirely on class lectures which dealt with the same pseudoscience your book is based on. Another good way to make “D” or “F” on a review is to exhibit total ignorance of class discussion on the pseudoscience your book is based on. Note this well!

BOOK REVIEW DEADLINES:

October 7 for Review #1.
November 11 for Review #2.

PHYSICAL FORM OF REVIEWS: Ideally, reviews should be and almost always are computer-printed. If handwritten, it is necessary that the review be *hand-printed*, NOT IN SCRIPT, in dark blue or black ink on white paper. Put your complete name on *several* pages of the review, *give the review a descriptive title*, and label it clearly as *Review #1* or *Review #2*. It is important to make a xerox copy of the completed review. In fact, if the xerox is more legible than the original, you can turn in the xerox and keep the original. Finally, make sure that at least your last name is written on EACH page; and, to repeat, all pages should be numbered, consecutively.

CLASS PARTICIPATION: Because this is primarily a lecture course, with self-contained lectures presenting material not readily found elsewhere, regular class attendance and participation **are a must**. *Attendance will be regularly checked by various methods which do not take time away from lectures.* Among these methods could be very short, in-class “pop quizzes” or more often the filling out of short forms as part of participation in a class demonstration of some “paranormal” feat. Note that class participation, as evaluated by such methods, counts 10% of the course grade, and thus in not-rare cases *can easily make a letter-grade difference in the final course grade.* **It is EXTREMELY important to realize that a student who has a straight “D” average in homework and book reviews, and also has a below-average attendance record, CAN FAIL THE COURSE!** In general a student with a poor attendance record will almost invariably receive a grade *one letter grade lower* than a student with a good attendance record and the same homework and book review averages.

CLASS DEMONSTRATIONS: are an important part of the course. *The purpose of the demonstrations is NOT to challenge you to guess the method used.* In a few cases the method will be deliberately obvious. In other cases the method used will be of “professional calibre” and would fool even many professional magicians. Be aware also that magicians and mentalists have a very wide variety of methods for achieving what looks like the same, basic effect. What you are supposed to get from the demonstrations is some idea of the range and sorts of “supernatural” feats and phenomena which can be easily be achieved by perfectly normal means.

COURSE HANDOUTS: There will be *many* class handouts during the semester. It is important to make sure you have all of these, and equally important to read the relevant handouts just before or after the corresponding class lecture. These handouts are sometimes drawn from rare sources, and contain information not readily found elsewhere. *[Such handouts should NOT be the only reference material used in book reviews. Primary references are those given in the course bibliography.]*

THE INSTRUCTOR:

Rory Coker, RLM 8.312, 471-5194, coker2@physics.utexas.edu
or RoryCoker@gmail.com

Office Hrs: In RLM, M, W 9 to 10:30 AM; Thur, 1 to 3 PM;
additional, Fri, 3 to 3:30 PM *outside Pai 2.48 classroom.*

<https://webspace.utexas.edu/cokerwr/www/coker.html>

Mailbox: RLM 5.208; Secretary, 471-1153

<https://webspace.utexas.edu/cokerwr/www/index.html/Phy341pseudosp05.html>

FALL 2013 — SYLLABUS FOR PHYSICS 341, PSEUDOSCIENCE

Readings: *Pseudoscience and Extraordinary Claims of the Paranormal*, by J. C. Smith [Wiley-Blackwell, 2010]. This book emphasizes tools for critical thinking, and encounters specific pseudosciences only as specific examples. Therefore the content of the first four or five lectures in our course is expanded into 10 chapters(!); this expanded presentation will be of extremely great help to you in doing the homework and writing book reviews. We refer to it below as PECP. The other reference we mention is *The Skeptic's Dictionary*, by Robert Todd Carroll; an up to date version is on-line. Individual topics can be looked up in it directly, as relevant to each lecture. Course handouts = HO. The course bibliography, which will be handed out in class after a few weeks, can and should always be consulted for additional information or detailed references. Where it is the principal source of material available for the lecture, the notation BIB appears under “suggested reading.”

DATE	TOPIC OF LECTURE	COMMENTS
Aug. 28	VERY STRANGE CLAIMS—The “New Age”?	PECP
Aug. 30	WHAT IS PSEUDOSCIENCE?	PECP, HO
Sept. 4	THE NATURE OF EVIDENCE	PECP, HO
Sept. 6	THE NATURE OF EVIDENCE (contd.)	PECP, HO
Sept. 9	ANCIENT ASTROLOGY & ASTRONOMY	PECP, HO, BIB
Sept. 11	MODERN ASTROLOGY	PECP, HO, BIB
Sept. 13	Background: CONJURING & MENTALISM	HO, BIB [deadline, refund drop]
Sept. 16	Background: SCIENCE FICTION	HO, BIB
Sept. 18	FORT AND FORTEANISM	HO, BIB
Sept. 20	MONSTERS	HO, BIB
Sept. 23	THE ANACHRONISTS! [HW 1 due!]	HO, BIB
Sept. 25	COLLIDING PLANETS! VELIKOVSKI	BIB, HO [drop w/o penalty]
Sept. 27	CREATIONISM: Abusing Science	HO, PEPC Ch. 15, BIB
Sept. 30	CREATIONISM & “ID”	HO, PEPC Ch. 15, BIB
Oct. 2	LOST CONTINENTS?	HO, BIB
Oct. 4	BLAVATSKI, QUEEN OF PSEUDOSCIENCE	HO, BIB
Oct. 7	PYRAMID MYTHS [BR 1 due!]	HO, BIB
Oct. 9	CRYSTAL MYTHS	HO, BIB
Oct. 11	SPACEGODS!	HO, BIB
Oct. 14	SPACEGOD CULTS	HO, BIB
Oct. 16	ANCIENT ASTRONAUTS & FLYING SAUCERS	HO, BIB
Oct. 18	FLYING SAUCERS & UFOs,	HO, BIB
Oct. 21	CONTACTEES?	HO, BIB
Oct. 23	DOWSING, PENDULUM, etc.	HO, BIB
Oct. 25	OUIJA, PROPHECY	HO, BIB
Oct. 28	PROPHECY, Pt. 2 [HW 2 due!]	HO, BIB
Oct. 30	FORTUNE TELLING, Pt. 1	HO, BIB
Nov. 1	FORTUNE TELLING Pt. 2	HO, BIB
Nov. 4	COLD READING, etc. [drop deadline Nov. 5]	PEPC pp. 148-156, HO, BIB
Nov. 6	ORIGINS OF QUACKERY	PEPC Ch. 13, BIB, HO
Nov. 8	QUACK “HEALERS”	PEPC Ch. 13, 14, BIB, HO
Nov. 11	QUACK DIETS, NUTRITION, etc.[BR 2 due!]	PEPC Ch. 13, 14, BIB, HO
Nov. 13	SPIRITUALISM IN THE 19th C.	PEPC, Ch. 11, HO

Nov. 15	20th C. SPIRITUALISM & "CHANNELING"	PEPC Ch. 11, HO
Nov. 18	ESP "RESEARCH", Pt. 1	PEPC Ch. 12, HO, BIB
Nov. 20	ESP "RESEARCH", Pt. 2	PEPC Ch. 12, HO, BIB
Nov. 22	PSYCHIC SUPER(CON)MEN	PEPC Ch. 12, HO
Nov. 25	PSYCHIC DETECTIVES, etc.	PEPC Ch. 12, HO, BIB
Nov. 27	AURAS & KIRLIAN GLOWS	BIB, HO
Dec. 2	REINCARNATION, SOULs, etc. [HW 3-4 due]	HO, BIB
Dec. 4	"LIFE" AFTER LIFE?	HO, BIB
Dec. 6	GHOSTS & OTHER STORIES	HO, BIB