

Psychology 104A: “Science, Pseudoscience, and Belief” Fall, 2007

Note: this course is linked to Dr. McCane’s course, Religion 201 “Old Testament”

RMSC-233

MWF 1:00-1:50pm

Lab: Mon 2:00-5:00pm

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Course web page: http://webs.wofford.edu/reidak/Psych%20104/psychology_104.htm

Textbooks:

- Stanovich, K. E. (2007). *How to Think Straight about Psychology*. 8th Ed. New York: Allyn & Bacon.
- Miller, K. R. (2002). *Finding Darwin’s God: A Scientist’s Search for Common Ground between God and Evolution*. New York: Harper Collins.

Course Content and Purpose:

Science is a process of acquiring knowledge about the natural world, including the behavior and mental processes of humans. It is this process that distinguishes science from other ways of knowing. Science has provided a way of understanding the world that is vastly different from those of earlier centuries. Science has also provided a methodology to test the validity of many of our explanations. In the years prior to college, students are bombarded with stories, television programs, and traditions about a wide array of extraordinary claims, such as extrasensory perception, telekinesis, astrology, dowsing, and mysterious healings. As a result, students often enter college with weird beliefs or not knowing what to believe. This course teaches how science can be used to test the validity of many of these claims. The course applies the scientific method to both ordinary and extraordinary beliefs, such as ESP, superstitions, claims of the paranormal, memory as belief, and a variety of methodologies such as evaluation of historical events, radio-carbon dating, the effectiveness of prayer, and personality tests. In the weekly labs, students work in small groups designing and carrying out experiments to evaluate the validity of claims such as those above.

The second half of the course involves an in-depth exploration of the relationships between religion and science. The textbook used in the second half of the course helps provide a logical inquiry into reconciliation between religious beliefs and scientific knowledge. The main goal of this exploration is to provide students with the opportunity to learn about and discuss important views of religious belief and science, including evolution, intelligent design, creationism, the big bang, and other topics.

Objectives:

- a) to learn the characteristics of science and distinguish science from pseudoscience and faith;
- b) to learn to think critically about extraordinary claims and how to test their validity;
- c) to learn which beliefs are subject to empirical testing and which are not, and why;
- d) to introduce a scientific methodology created to measure and quantify many psychological characteristics of individual humans;
- e) to learn to recognize and evaluate pseudoscientific and extraordinary claims in the media;
- f) to learn the strengths and weaknesses related to current arguments between religion and science;
- g) to learn how religious beliefs can be reconciled with knowledge produced by science.

Course Requirements: You are expected to attend every class period and complete every lab assignment. You will turn in a typed lab report after completing each experiment or project, about one every other week. These lab reports will typically be due at the beginning of the next week's lab period. Naturally, you are responsible for all reading assignments and all lecture material. In accordance with Wofford's policy on class attendance, unexcused absences will lower your final grade. Excused absences include those due to documented medical need or an *official* college event. **Written excuses are required for absences to be excused.** In every case of missed class, students are ultimately responsible for the material and experiences covered during their absence. If you miss class, never ask the professor if you missed anything important! You did, and other students did not benefit from your ideas!

In all situations, the responsibilities and procedures of the Wofford College Honor Code will be followed.

Methods of Evaluation: Your final grades will be based on exams, in-class discussion, occasional written assignments (in class and out of class), and on your laboratory projects. There will be four exams (including the final exam), which will typically contain a mixture of short-answer and objective questions. All of your lab assignments must be completed and a typed lab report turned in for each one.

Working together with the two professors, you will create a classroom environment that will stimulate discussion of the reading material and applications to important questions in life. You will have the opportunity to challenge yourself and your classmates about your opinions and your ways of viewing the world. The classroom is an opportunity for active participation and discussion of intriguing questions -- a time to have fun exploring ideas and to learn from others.

Therefore, discussion in class is expected -- your contribution will affect your grade. The more you contribute to the creation of a stimulating, educational classroom environment, the higher your grade will be. It will be obvious to all if you arrive to class without having completed the assigned reading, and such negligence will obviously lower your grade.

Boring Catalog Description: A study of topics selected to introduce students to basic concepts in psychology and to the scientific method. Does not count toward a major in psychology or toward science requirements for the BS degree.

Designed to develop in students an appreciation of the procedures of logical inquiry, observation, abstraction, generalization, analysis, and prediction by which scientists organize man's understanding of nature, these courses place emphasis on exemplifying science, rather than on acquiring familiarity with a specific body of content. The instructors involve their students in science studies closely related to the instructors' fields of competence and enthusiasm.

The professor reserves the right to make alterations to this syllabus.