

Experiments in Beauty

Fall 2009

Class meets M, W, 4:55 – 6:10 PM, Meyer Hall, room 771

September to December, 2009

Professor Denis Pelli

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Meyer Hall, room 959

Grading:

33.3% class participation, 33.3% weekly written questions, 33.3% final written essay. There will be no exams.

The topic is beauty. We will touch on what qualities make something beautiful (e.g. symmetry is often mentioned), but our focus will be on understanding what beauty is as a perceptual process.

This class will expose you to the actual process of science: making original observations, asking new questions, formulating them as testable ideas, doing real experiments (outcome not known in advance), and then, thinking it through all over again to understand what's really going on. And finally, examining critically what we can definitely conclude and convince our peers of. Thus we will de-emphasize learning of facts, and instead try to learn the process, the exploration. That's why it's called a "Lab". Since real science can only be about new things—what we don't know—we won't know in advance how experiments will turn out. This can be exciting and disconcerting.

Each week, we will read one article, which will be distributed by email on Thursday or Friday and discussed in class on Monday. Along with the article, there will be a question that every student must answer in writing, due on Monday, when the article is discussed. The Monday discussion will take the form of a "convince me" meeting. Half the class, working cooperatively will try to convince the other half of what they consider to be the key points of the article.

Each student is required to write **one essay** (about 15 pages), which may be on the topic of an article or an experiment that we did in class, or something related. The essay topic must be approved in advance. The essay must expose the science: what is the question (and why is it interesting), what is the evidence, and what can we conclude. Due on the last day of class.

Students are encouraged to base their essay on an in-class experiment. Collaboration of two students is ideal. They will run the experiment, with their classmates as observers. Once the data are collected and analyzed very quickly, they should lead a class discussion of what they got and what can be concluded.

About half our time will be lecture/discussion, and about half will be devoted to doing experiments. Experiments, will be designed cooperatively with the class, and may include measuring efficiency of letter identification, as a test of Gestalt principles of perception, and measuring the threshold for beauty in art. If weather allows, we will visit James Turrell's sky view at the PS1 museum in Queens.

Articles for weekly readings include: Robert Irwin (artist), Virginia Woolf (writer), Weber (scientist), Berlin (philosopher/historian), Wertheimer (psychologist), Field et al. (psychophysicists), Turrell (artist).