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FALL 2015 COURSE DESCRIPTIONS

76-198, Research Training Course in Rhetoric
Section A, Professor John Oddo
Contact by email: joddo@andrew.cmu.edu, and include information about your interest in this project and why you think you'd be a good fit.

War Propaganda
As part of an ongoing book project on war propaganda, this course will involve analyzing certain forms of language used to justify war. Specifically, we will be working with several corpora of presidential discourse (speeches, campaign ads, debates), identifying certain slogans, creating a database, and coding for rhetorical function. The project may also involve other corpus-based approaches to language analysis and close-level reading of political and media texts. Students may also be asked to read and summarize historical literature and other source materials.

Open to 1-2 students.

79-198, Research Training in History, 9 units
Section A, Professor Lisa Tetrault
Contact by email: tetrault@cmu.edu, and include information about your interest in this project.

Women and Violence
1 In 4 women will suffer abuse in her lifetime by a partner. It’s an epidemic that we, as a society, rarely confront honestly. It's private and hidden from view. It also defies our sense of the “home” as a safe and nurturing place. But violence is the reality for astonishing numbers. If every woman battered by their partner—in just one year—held hands, the line would stretch from Los Angeles to New York City and back. The numbers are staggering, but we have almost no histories of it. In anticipation of a new book project on the history of domestic (also called intimate partner) violence, I’d like to spend a semester gathering resources, reading through them, taking notes, identifying the important historical shifts in the problem, and building a database. Together, we’d tackle this initial venture into the literature and sources, working to bring this epidemic to light and, ideally, to help end the cycle of abuse.

Open more than one student.

82-198, Research Training in Modern Languages
Section A, Prof. Felipe Gomez

Hispanic Comics
Contact by email: fgomez@andrew.cmu.edu, and include information about your interest in this project.

This project involves research of Spanish-language comics. The course will teach research, critical reading, and thinking skills useful to students of all majors. Student researchers will assist in: a) identifying, locating, and reviewing major examples of comics from the Hispanic world; b) identifying and selecting canonic and recent theoretical and critical readings about the comic genre in the Hispanic world to contribute to a literature review; c) analyzing and categorizing comics according to given criteria.

Some of the texts are originally written in English or are available in translation, but most are in Spanish. Possible long-term results of this project include a course of study built around this research, and perhaps a published work (for which student participants would be acknowledged as contributors).
Using Data to Explore Online Learning
Research for this course will involve three parts: 1. Examining data from student interviews and recordings of their work during an online French course; 2. Improving the interview protocol from fall 2014 based on research and that experience; 3. Carrying out more interviews based on an improved protocol and information from the fall 2014 data. Students need no knowledge of statistics or French for this course.

Psycholinguistics: Analyzing Chinese and Korean Speakers’ Production of English Morphemes
The ability to understand and produce morphemes, the smallest meaningful parts of words (such as mean-, -ing, -ful, word-, and -s), is crucial for successful language use. In native and very advanced second language speakers, morphological processing is automatic and does not require attention and factual grammatical knowledge. However, non-advanced second language speakers are often forced to rely on memorized facts about grammar in order to understand and produce morphemes. This use of factual knowledge competes for attentional resources with other ongoing cognitive processes (such as planning what one is going to say, trying to act appropriately, driving, thinking, etc.). The result is that speakers are often unable to use morphology correctly while simultaneously attempting to do another task.

In this course, we will deal with a large set of English sentences recorded in a psycholinguistics experiment. Native speakers of English, Chinese, and Korean were asked to listen to and then repeat English sentences, some of which were correct, and some of which contained morphological violations (e.g., Elephants have five *leg and two ears.). The participants were instructed to always repeat the sentences in correct English. Before repeating a sentence, the participants were asked to evaluate it for whether it was true or false in terms of content. In 50% of the cases, the participants had to perform an additional task (a mathematical calculation) before hearing a sentence, remember the result of this calculation while repeating the sentence, and, finally, report on the result of the calculation. (As you can imagine, this was not easy!).

We will listen to the sentences and code them as “correctly repeated” or “incorrectly repeated”. We will establish the extent to which different raters agree when making this judgment. We will produce a dataset which will subsequently be statistically analyzed to determine whether English, Korean, and Chinese speakers behaved similarly or differently on this task. The analysis will examine whether successful morpheme production depends on the type of morpheme being produced and whether speaking Korean makes it easier to do this task than speaking Chinese. Also, it will correlate performance on this task with measures of short-term and working memory as well as a measure of English proficiency.

In this course, students will learn about morphological processing, transcribe sentences, code them, and help create and manage the data set. Those who perform exceptionally and express interest may be invited to collaborate on future data analysis and the presentation/publication of the results.

Open to more than one student
Contact: Vedran Dronjic at vdronjic@andrew.cmu.edu and include information about your background in linguistics, psychology, or foreign languages and your interest in this project.

82-198, Research Training: Modern Languages, 9 units
Section D, Professor Susan Polansky
Contact by email: sp3e@andrew.cmu.edu, and include information about your interest in this project.

Cross-Cultural Currents between Spain and the Americas: The Case of Chocolate
This project involves examination of 17th and 18th century treatises in Spanish that document the uses and consumption of chocolate in Spain and the Americas. Students will assist in researching the evolution and reception of these works and their adaptations.
Open to one or two students with at least advanced intermediate level reading knowledge of Spanish.

85-198, Section A, Research Training in Psychology
Section A, Professor Vicki Helgeson
Contact by email: vh2e@andrew.cmu.edu
Research on Adjustment to Chronic Illness
Students will be introduced to the field of health psychology with a specific focus on how people adjust to chronic illness. The illness that will be the specific focus of study is diabetes. Students will read articles on the psychosocial factors involved in how people adjust to chronic illness, including personality factors and relationship factors. Students also will have hands-on experience with the topic in either working with the data collected from people who have diabetes or interviewing people who have diabetes.
Open up to 5 students.

85-198, Research Training in Psychology
Section C, Professor Michael Scheier
Contact: Maria G Mens, mmens@andrew.cmu.edu or Mike Scheier (scheier@cmu.edu)
Personality Psychology
This course provides students with research experience in the area of personality psychology. Our lab focuses on investigating how individuals manage their goal pursuits, with an emphasis on management of goals during serious illness. Students will have the opportunity to be involved in a longitudinal project with a sample of breast cancer patients, and various laboratory experiments. In laboratory projects, students will gain experience working as an experimenter, scheduling and running participants, collecting data, and managing/analyzing this data. In longitudinal projects, students will gain experience in coding qualitative data and analyzing this data. Lab meetings will also help students improve their ability to read and understand research literature, and to think critically about research methodology.
Open to more than one student.

85-198, Research Training: Psychology, 9 units
Section J, Professor Laurie Heller
Contact by email: laurieheller@cmu.edu, and include information about your interest in this project.
Research Training in Auditory Perception
This course provides students with research experience in the area of auditory perception. Students will assist with research projects in the Auditory Perception Laboratory, obtaining hands-on experience with various aspects of conducting research. Students will gain experience in study design,
participant recruitment & scheduling, working as an experimenter, data collection, and data management/analysis including acoustic analysis and possibly sound recording and sound synthesis. For example, students may conduct an analysis of the acoustics of sounds which have similar perceptual qualities, or they may run an experiment in which listeners judge the causes of sounds, or listeners may do tasks seemingly unrelated to the sounds they hear and show evidence of unconscious priming when sounds and words (or gestures) are related. Students with a special interest in sound synthesis and/or matlab programming should bring attention to that interest.

Open to more than one student.

85-198, Research Training: Psychology, 9 units
Section K, Professor Erik D. Thiessen
Contact: thiessen@andrew.cmu.edu, and include information about your interests in this project.

The Role of Learning in Infants' Language Acquisition
In order to master their language, infants need to learn an extraordinary amount. They must discover what sounds occur in their language, how those sounds relate to meaning, the identity and meaning of words in their language, and how to string those words together into sentences. Infants are exposed to a rich linguistic environment, but little is known about how infants are able to take advantage of the richness of this environment.

In the Infant Language and Learning Lab (http://www.psy.cmu.edu/~thiessen/home.html), we try to understand how infants are able to learn from their environment. In particular, we explore how infants respond to the distribution of probabilistic information across levels of linguistic organization like sound and meaning. To do so, we use a variety of experimental methods, such as habituation, in studies with infants between the ages of 6 and 24 months.

Our experiments present infants with novel languages, and examine what infants are able to learn from them. Specifically, upcoming projects will examine how infants learn that different sounds (like /d/ and /t/) indicate different meanings, how infants discover the rules governing word order in phrases, and how infants learn about the rhythmic structure of their native language.

Open to more than one student.

85-198, Research Training: Psychology, 9 units
Section M, Professor Brooke Feeney
Contact by email: bfeeney@andrew.cmu.edu, and include information about your interest in this project.

Research Training in Social Psychology
This course provides students with research experience in the area of social psychology. Students will assist with research projects in the Relationships Laboratory, thereby obtaining actual, hands-on experience with various aspects of large research projects on the topic of interpersonal relations. As a member of the Relationships Lab, students will gain experience in study design, participant recruitment & scheduling, working as an experimenter, data collection, and data management/analysis. For example, students may work with newlyweds and dating couples in an experimenter role, code videos of couple interactions, assist with data entry and data analysis, assist with preparation of research reports, and assist with library work.

Open to more than one student.
Section N, Professor Charles Kemp
Contact: please email ckemp@cmu.edu and include information about your interests in this project.

Understanding Learning and Reasoning
Students will assist with ongoing research projects that explore learning and reasoning. Tasks may include helping to design experiments, schedule and run participants, and analyze data. Many of these experiments are motivated by computational models, and students will have the opportunity to learn about these models if they desire.

84-198, Research Training: Institute for Politics and Strategy, 9 units
Section A, Prof. Kiron Skinner
Contact by email: kskinner@andrew.cmu.edu and include information concerning your interest in this project.

International Relations: US Cold War Strategy and US Strategy Regarding International Terrorism
This research focuses on the period of 1979 (the fall of the shah of Iran) to 1989 (the fall of the Berlin Wall) to understand an issue that has received scant scholarly attention. Students of U.S. foreign policy typically view this period as the final decade of the cold war. Indeed it was. It also was, however, the first decade in which U.S. strategists were faced with persistent terrorism, especially against U.S. citizens in the Middle East. This research seeks to understand the ways in which the gathering storm of radical Islam affected U.S. cold war strategy, and vice versa. In addition to reviewing scholarly books and articles on terrorism and the cold war, this research includes analyzing primary documents from the private archives of some of the U.S. officials during the Carter and Reagan presidencies.

36-198: Freshman-Sophomore Research Training Course
Peter E. Freeman (pfreeman@cmu.edu)

Inferring the Relationship Between Galaxy Shapes and the Structures of Their Host Clusters
Galaxy clusters, which consist of hundreds to thousands of individual galaxies, are the largest structures in the Universe that are bound together by gravity. The shapes of galaxies within a cluster are generally elliptical, but the orientations of the ellipses are not random. In this project, students will determine how galaxy alignment changes as a function of various quantities such as the number of galaxies in the cluster or the luminosity of the cluster's brightest galaxy. All analyses will be done using the statistical package R. No prior knowledge of astronomy (or of R or of basic data analysis algorithms) is required.

3 students maximum