Clinical Research Coordinator
On-line course: DOCE Number

Professor: James H. Cauraugh, Ph.D.
Office: 132-F FLG, Motor Behavior Laboratory
Office hours by appointment; Office Phone: 392-0584, ext. 1273
E-mail: jcaura@hhp.ufl.edu

Required Text

Course Description

The purpose of this course is to explore and discuss established rules for conducting good science. Scientific problem solving serves as a basis for asking important questions, generating hypotheses, writing clearly, understanding experimental design and statistics, and accepting the responsibilities of "playing the game that scientists play." Clinical Research Coordinators must be aware and well versed in all phases of research.

Course Objectives

The primary objective is to investigate the research process and become familiar with knowledge about various aspects of how to conduct scientific inquiries. Additional objectives include philosophical issues related to clinical research, problem solving procedures, terminology, experimental designs, analysis decisions, and writing an informed consent.

Course Requirements

1. Write and submit one research journal entry per week for six weeks.
2. Complete and submit problem-solving tasks.
3. Successfully complete a quiz after each on-line lecture.
4. Write and submit an Informed Consent.

Lectures

1. Clinical Research Coordinator On-line Course: James Cauraugh
2. Research Methods Overview: James Cauraugh
3. Philosophy of Science and Ethical Considerations: Thomas Clanton
4. Experimental Design and Hypothesis Testing: James Cauraugh
5. Research Integrity and Responsible Conduct of Research: Robert Kolb
6. Statistical Principles: James Cauraugh
7. Roles of the Clinical Research Coordinator: Teresa d’Angelo
8. Obtaining Informed Consent: Wajeeh Bajwa

Evaluation of Course Requirements

<table>
<thead>
<tr>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Journal Entries</td>
</tr>
<tr>
<td>Problem Solving Tasks</td>
</tr>
<tr>
<td>Seven exams</td>
</tr>
<tr>
<td>Informed Consent</td>
</tr>
</tbody>
</table>

Grade Scale
Pass/fail option: ≥ 70 points

A Brief Motivational Perspective
Your research methods experiences will be meaningful given that you actively use the information presented and discussed. Enjoy this exposure to the scientific arena. Practice speaking about scientific concepts and supporting your statements with logical thinking and empirical evidence. The information for this course is readily learned when clinical research coordinators give sincere efforts. Thank you.

Research Journal: Weekly Writing Assignments

Dr. Cauraugh
January 29, 2010

Once a week for six weeks, you should record your thoughts about science or research and write these in a journal/log. For each journal entry, should take at least 20 minutes as you focus your thoughts on research and record them in one or two paragraphs. Follow Platt’s (1964) classic suggestion and use this journal to develop your ideas and thoughts about possible topics, constructs, or alternative hypotheses.

Some leading questions are: Do your observations or readings present any interesting research issues to investigate? Is the information consistent with your previous knowledge? Why? Are there any contradictions? Why or how? Do your observations or reading help in understanding a concept about science that you think is useful? How does the information help you understand science better? What are the details?

An example of interesting journal entry follows:

Not many people think about motor control on a daily basis. Following the first class lecture, my awareness of aspects in my life and my environment that involve motor control began to increase. The questions asked concerning how a movement is initiated, controlled, and terminated brought new meaning to things that I take for granted. Walking, riding a bike, driving a car, writing, and aerobic classes are activities that I take part in on a daily basis. They seem to be automatic. No real thought goes into the exact sequence of movements before or
during execution. For instance, when I get into my car, I automatically push the clutch down, release the brake, turn on the ignition, and go. The days of stalling at traffic lights and failing to push the clutch in at the right time are long forgotten. Now the movements just come naturally. How did I achieve this state or skill level? How do researchers investigate the scientific basis these types of questions?

Your entries will be read and evaluated twice during the semester. The evaluation criteria are writing style and organization of thoughts. Briefly, the journals should represent your thoughts about science in a clear and precise way.


**Weekly Problem Solving Tasks**

Dr. Cauraugh

January 29, 2010

This on-line course has three research problem solving tasks to expand your horizons. The problems usually take 15 – 20 minutes. The time required depends on how efficient you are in searching a traditional library and an electronic library for information. Once you complete the tasks, write a summary for each task, and send the summary to jcaura@hhp.ufl.edu.

<table>
<thead>
<tr>
<th>Week</th>
<th>Task</th>
</tr>
</thead>
</table>
| 1.   | Find, print, and read three classic *Science* articles written in the 1960's and a 2002 article. Go to electronic journals on the UF Library homepage. JSTOR is a listing for the first three classic articles: [http://www.jstor.org/about/collection.list.html](http://www.jstor.org/about/collection.list.html). An author search on PubMed will give you the Hoppin article.  
  
| 2.   | (a) Go to PubMed on-line (http://www.ncbi.nlm.nih.gov/sites/entrez/) and print out three abstracts of interesting articles. Download the most interesting article and write a short summary of the article (limit 175 words). Be sure that a colleague reads your summary at least once and you revise it according to suggestions.  
  
  (b) Go to a government record source of scientific projects: NIH RePORTER ([http://projectreporter.nih.gov/reporter.cfm](http://projectreporter.nih.gov/reporter.cfm)). Submit a query for a topic or PI. Print one page of your findings. RePORTER is an acronym for what words? |
3. (a) What are the impact ratings of five refereed journals in your area of study? 
Source: ISI Web of Knowledge: 
Access to ISI is limited to computers connected to UF. At the tab menu on top of screen: Select a database; then click Journal Citation Reports. JCR Science 2008 and View all journals (submit). Directly under Journal Summary List, click drop down menu and activate impact factor, then click SORT AGAIN. Print first page. How many journals are monitored in JCS Science Edition?

(b) Select an author in your area of study and check the number times that her or his articles have been cited in 2008 and 2009. Source: Web of Science: 
http://apps.isiknowledge.com/WOS_GeneralSearch_input.do?highlighted_tab=WOS&product=WOS&last_prod=WOS&SID=2Ac5pgFGC4a8L6NLaGF&search_mode=GeneralSearch

Go to author line and type last name, first initial with an * (just like to example); then click search. What is the first and last name of the author you looked up? How many citations in 2008 and 2009?