

COURSE OUTLINE  
PSYC 215  
John Conklin & Randal Tonks  
Camosun College  
Fall 2002

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Text:

Kolb, B. & Whishaw, I. (2001). An Introduction to Brain and Behavior. N.Y.: Worth

## Course Aims:

This course provides an overview of the field of biopsychology including the basic structures and functions of the central nervous system (CNS), the structure and functions of neurons, methods of research and treatment used in biopsychology, and the correlations between the CNS and behavior.

## Course Objectives:

### **By the end of this course you should understand:**

The basic structures of the Central Nervous System

The basic structure and function of the neuron including the resting membrane potential, the creation of the action potential, and synaptic transmission.

The current thinking about the relationship between the structure, function and evolution of the CNS and behaviour and experience.

The basic principles of brain organization.

The role of human evolution in shaping the CNS and its capacities for behavior, experience, perception and emotion.

The role of neurotransmitters and ion channels in the processes responsible for communication between neurons.

The nature of psychoactive substances that allow them to alter CNS function.

The basic processes involved in the development and repair of the CNS

An overview of recent advances in several fields including biotechnology and stereotaxic surgery in the attempts to understand and treat various CNS based disorders.

The basic structures and processes involved in human movement, sensation, perception, , language, sleep, and complex cognition.

**Presumed Knowledge:**

## **Presumed Knowledge for Psychology 215**

In order to get the most out of Psychology 215, An Introduction to Biopsychology the following are recommended:

Knowledge

A basic understanding of the various fields and activities of psychology. See for example the homepage of the American Psychological Association <http://www.apa.org/>

or

the Canadian Psychological Association <http://www.cpa.ca/>

and the various divisions and activities listed there

Some basic understanding the structure of the brain would be useful. The brain is constructed of neurons, various centres of the brain perform different functions, etc. Have a look at:

<http://faculty.washington.edu/chudler/introb.html>

I know it says “neuroscience for kids” but it is a good foundation in biopsychology.

Some understanding of very basic chemistry would be very useful, ions, osmosis, etc. Again

Chem4kids <http://www.chem4kids.com/>

has all the basic background that you should need. A bit more advance is the

Chemistry Basics site: <http://chem.neopages.com/tutorials/basc.shtml>

The whole field of biopsychology is based on the scientific method and its various research methods. For an introduction to the scientific method try here:

[http://teacher.nsrj.rochester.edu/phy\\_labs/AppendixE/AppendixE.html](http://teacher.nsrj.rochester.edu/phy_labs/AppendixE/AppendixE.html)

or

[http://home.xnet.com/~blatura/skep\\_1.html](http://home.xnet.com/~blatura/skep_1.html)

or

[http://koning.ecsu.ctstateu.edu/Plants\\_Human/scimeth.html](http://koning.ecsu.ctstateu.edu/Plants_Human/scimeth.html)

I would be good to have some basic understanding of several basic human functions that have been investigated by psychology: for example

Memory:

The San Francisco Exploratorium memory exhibit:

<http://www.exploratorium.edu/memory/>

Perception:

**The Joy of Visual Perception**

<http://www.yorku.ca/eye/noframes.htm>

Tutorials in Sensation and Perception

[http://psych.hanover.edu/Krantz/sen\\_tut.html](http://psych.hanover.edu/Krantz/sen_tut.html)

Disorders, etc.

This site has links to a variety of relevant topics including basic information of a number of mental disorders:

<http://cep.jmu.edu/psychology/neuro/>

For a basic on-line review of psychology including videos click here:

<http://cybersisman.com/aepsychology1a/>

For many links that preview topics taught in this course:

<http://www.univ.trieste.it/~brain/NeuroBiol/Neuroscienze%20per%20tutti/ehceduc.html>

[These prerequisites would usually be covered by taking Camosun Psychology 110 and one of 120, 130, 150, or 164.]

Skills:

The most important skill in any science course is being able to find current information about what is going on in the field from primary sources. This used to be called “library research” and now would be called Internet/library research I guess.

Here is a tutorial that includes video from the Cornell library:

<http://www.library.cornell.edu/okuref/research/tutorial.html>

Here are some hints from the APA site:

<http://www.apa.org/science/lib.html>

And here are tips for using PsycInfo from their web site:

<http://www.apa.org/psycinfo/training/>

Writing a Research Paper:

Hopefully you will have written a research paper with some guidance in an English course. For review try here:

A Guide for Writing Research Papers  
based on Styles Recommended by  
The American Psychological Association

[http://webster.commnet.edu/apa/apa\\_index.htm](http://webster.commnet.edu/apa/apa_index.htm)

Writing a Research Paper Purdue Univ.

<http://owl.english.purdue.edu/workshops/hypertext/ResearchW/>

Ten steps in writing a research paper

<http://library.ust.hk/serv/skills/libskill.html>

## **Dr. Gwen's Research Paper Information Page**

<http://www.fccj.org/LearningResources/DrGwen/research.htm>

[These prerequisites would usually be met by taking an English course in which a research paper is written (Camosun English 150), or another course where such a paper is produced]

### **Computer and Internet Skills**

Much that is helpful for this course is online. We don't do anything that you can't learn as we go, but it would be very helpful if you knew how to use a keyboard with 10 fingers ("type"); find information on the Internet, and create and send files using a word processor and email system.

[These days many of these skills are picked up by having an Internet linked computer in the home, or taking a course such as Camosun Comp 156.]

### **Attitudes:**

To get much out of a course like this you need to possess the basic attitudes of science. You need to open to new ideas, willing to subject your beliefs to testing, you need to see learning new stuff as just about as much fun as a person can have and you need to be willing to do all this publicly.

See also:

Values and attitudes in science:

<http://isis.csu Hayward.edu/ALSS/soc/NAN/scivals.htm>

American Scientist site:

<http://www.americanscientist.org/>

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## **I. Course Description**

For the calendar description of this course click [here](#).

Psychology 215, Biological Psychology, is second year course designed for university transfer students who intend to continue their education in psychology, sciences or related fields. It could also prove interesting and useful to anyone with an interest in human behavior and its relationship to the central nervous system. Along the way scientific method, genetics, neuroanatomy, biochemistry, development, perception, movement, sexual behavior, brain damage, mental disorders, methods of assessment, etc. will be discussed.

## **II. Course Requirements:**

Psychology 215 is a second year course so I will make certain assumptions about your background in psychology and your intellectual and research skills. I will assume that you have a general grounding in psychology including methods of research, the basics of schools or approaches to psychology, and an overview of the content areas of psychology such as sensation, perception, learning, abnormal, developmental, social, etc. If I mention the difference



between correlational research and experimental research or the relationships between sensation and perception I will assume that no explanation is needed.

I also assume that you have written a research paper, are somewhat skilled at finding primary source material in a library and understand the rules of citing sources in research papers. You may not be familiar with the intricacies of APA (American Psychological Association) style, but I assume that you are familiar with some style and can adapt to APA style. For a quick overview of APA paper style have a look at the APA Style Guide Summary produced by the Camosun College Psychology Department in this WebCT table of contents or try [APA Style Resources](#).

### III. Course Organization

This course is organized in two distinct ways. The first is quite traditional involving lectures, seminars, written assignments done on your own, and tests using the internet facilities of WebCT to provide information about the course and enhanced learning opportunities. The second is, a fully "online" course, that is available to distance students. The course material, objectives and assignments are the same for both courses.

I will offer you the opportunity to use computers extensively in this course. I will make computer accounts available for you and give you basic instructions on using e-mail, word processing and computer mediated research. Both the computing services department and the library offer workshops on the use of computers and research skills. For some basic information on computer ethics have a look at the [Camosun Computer Users Ethic Policy](#)

### IV. Marking

ASSIGNMENTS	
Weekly Assignments & practice tests	10%
Article Review	10%
Mid-Term Exam	25%
Final Exam	30%
Research Paper	25%

MARKING SYSTEM			
A+	94.5%-100%	B-	69.5%-74.5%
A	89.5%-94.5%	C+	64.5%-69.5%
A-	84.5%-89.5%	C	59.5%-64.5%
B+	79.5%-84.5%	D	49.5%-59.5%
B	74.5%-79.5%	F	0-49.5%

## ASSIGNMENTS

In general all work and assignments must be handed in on the due date. If an emergency or serious problem comes up prior to the exam or due date you may apply for an extension. This must be done in person before, preferably well before, the date in question. I would prefer to receive work via WebCT email as an attachment. If you are using MS Word just send your .doc file. If you are using Works, or WordPerfect or an Apple word processor save your file as a "Rich Text Format" file (.rtf) and send that as an attachment. Work occasionally goes missing at an institution so you are responsible for keeping a copy of all work handed in. One advantage of e-mailed assignments is that I have a permanent record of the file, when it was sent, etc. and I will have a copy of the marked paper that I return to you via email. All work must be handed to me in person or e-mailed. All written work must be in APA format.

## **WEEKLY ASSIGNMENTS**

Each week there will be an assignment and a practice test that will appear in the course path. These two together are worth 1% of your final mark up to a maximum of 10%. We will only accept one weekly assignment per week though if you want to work ahead on these discuss this with us. 1/2 of each weekly assignment consists of taking the practice test relevant to that week's work. In order to get credit for the written assignment it must be done thoroughly and seriously. In order to get credit for the practice test part of the credit you must get 50% of the questions correct.

## **EXAMS**

There will be two exams during this course. The first, about half way through, will cover the material to that point. It will include multiple choice questions, diagrams, short answer and essay questions. A study guide in the form of "goals" is attached to each chapter study guide in WebCT. The second exam will be a comprehensive exam covering material from the whole year. Approximately 33% of the exam will be from before the midterm and 66% from after the midterm. All exams will be taken on computer in the Ewing computer labs. What a joy it is to have the computer mark the m/c questions and to mark keyboarded essays rather than 100 versions of handwriting! If you really can't use a keyboard let me know and we'll make arrangements for you to use the computer for the objective part of the test and then hand write the essays.

## **ARTICLE REVIEW**

The basis of most research in psychology is in knowing the nature of what has come before. Most research is designed to test a theory (explanatory model) by devising an experiment or set of observations that would develop in a particular direction if the theory is correct. But a theory is never created wholly out of the present, it is based on the past, on

previous thinking and experimentation. Most research reports begin with a review of previous literature. This assignment involves obtaining some previous literature, from a psychological journal, and summarizing it briefly. This involves reading something about a topic from primary sources. Search for primary sources in an index, usually "Psychological Abstracts", called PsycInfo in the library on-line research system. EbscoHost is also there and is a good source of full text on-line primary source journal articles. Obtain a copy of the article, read it, and summarizing it. For our purposes you need only summarize the theory or explanatory model being investigated and what their results say about that theory or model. If you obtained your article from the Internet your bibliography will contain the URL (Internet address) will appear in your reference section and I will be able to click on it and read the article. If you got the article in hard copy please hand in to me the introduction and summary of the article if not the whole article.

In either case this assignment will run to about 250 words. Note: Make sure that your article has to do with the topic of this course: Biopsychology There is a model of a good review in the WebCT table of contents

## **RESEARCH (REVIEW) PAPER**

A review paper is one that gathers the most recent relevant information about a topic, organizes it and presents a summary of findings from several recent sources. A typical topic would be the current state of theories or models of the cause of schizophrenia. A writer would find several "primary source" articles, organize their content and present a summary that basically answers the question: "what is the current state of the field with regard to models of the etiology of schizophrenia?" There may be several competing theories in which case the paper would be organized along the lines of a compare and contrast paper that draws conclusions. This paper should be a minimum of five pages or about 1200 words exclusive of the title page, and reference list. It should include "several," around 10 sources, almost all primary sources. Don't get hung up on the number of sources you need sufficient empirical data to support your points. Textbooks, encyclopaedias, and the like are not

appropriate sources for research papers and would be used only in rare circumstances. The reference list should contain only sources actually used for the paper, no filler please. See the research paper guidelines in the WebCT table of contents.

### **Flexibility:**

The above is well organized and sensible, but it may not suite your learning style. If you would like to make some modifications in the way you take the course please come and discuss it with your instructor. For example, some people just hate multiple choice tests so we could arrange tests for you that are all essay, or we could arrange a course that it all papers, no tests at all. The only thing we would not feel comfortable arranging is an evaluation scheme that was all multiple choice tests, no writing, no integration of knowledge.

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