

School of Arts & Science PSYCHOLOGY DEPARTMENT

PSYC 215-001 Biological Psychology Winter 2007

COURSE OUTLINE

The Approved Course Description is available on the web @

 Ω Please note: this outline will be electronically stored for five (5) years only. It is strongly recommended students keep this outline for your records.

1. Instructor Information

| (a) | Instructor: | John Conklin | |
|-----|---------------|--------------------------------------|--|
| (b) | Office Hours: | [See website below] | |
| (c) | Location: | F350C | |
| (d) | Phone: | 370-3196 | |
| (e) | Email: | conklin@camosun.bc.ca | |
| (f) | Website: | http://conklin.disted.camosun.bc.ca/ | |

2. Intended Learning Outcomes

Upon completion of this course the student should be able to:

- 1. Summarize the history of biopsychology, and the relationship of biopsychological theories and methods to the broader field of psychology.
- 2. Compare the most important research methods used in biopsychology.
- 3. Discuss the basic concepts, supporting the evidence for the interaction of evolution, genetics and experience in the development of behaviour.
- 4. Label and summarize the basic structures and functions of the human nervous system.
- 5. Explain the processes involved in neural conduction and synaptic transmission.
- 6. Label images of the human visual system and explain basic visual processes in the central nervous system.
- 7. Discuss the mechanisms of perception, consciousness, awareness and attention.
- 8. Describe the functioning of the human sensorimotor system.
- 9. Summarize the processes involved in the development of the human nervous system and the ways in which the human brain attempts to cope with brain damage with an emphasis on neuroplasticity.
- 10. Discuss human learning, memory and amnesia as they relate to the human brain.
- 11. Summarize human sexual development, human sexual dimorphism and the effects of hormones on human development and behaviour.
- 12. Describe a model of drug addiction and a general model of the effects of various drugs on the neuronal function.
- 13. Discuss various disorders of cognition and emotion with regard to the human brain.

- 14. Summarize the effects of stress and emotions on human neurophysiology.
- 15. Discuss the neurophysiology of schizophrenia, depression and anxiety and attempts to treat these disorders.

3. Required Materials

| (a) | Texts | Texts: Pinel, John. (2005) 6e. Biopsychology. Toronto: Allyn and Bacon |
|-----|-------|--|
|-----|-------|--|

7. Recommended Materials or Services to Assist Students to Succeed Throughout the Course

LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College calendar, at Student Services or the College web site at camosun.ca.

STUDENT CONDUCT POLICY

There is a Student Conduct Policy **which includes plagiarism**. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, at Student Services and on the College web site in the Policy Section.

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 behaviour.

This syllabus/course outline emphasizes three themes. The theme of **methodology** encourages the student to understand and evaluate the methods used in the development of the field of biopsychology. The **theme of explanatory models or theories** encourages the student to consider what **theories** are current in the field of biopsychology, their history and possible future development. The theme of **ethics** encourages the student to look at the impact of psychology on the participants of psychology studies, and the impact of biopsychology on everyday life.

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. I assume that you know the rules for citing sources in research papers. If you are unclear about this please ask before the paper is due.

III. Course Organization

This course involves 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.

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 | Value | |
|--------------------------|-------|--|
| Weekly Labs and Practice | 20% | |
| Tests | | |
| Tests Article Review | 10% | |
| Midterm Exam | 20% | |
| Research Paper | 25% | |
| Final Exam | 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% | С | 59.5%-64.5% | | |
| B+ | 79.5%- 84.5% | D | 49.5%-59.5% | | |
| В | 74.5%- 79.5% | F | 0-49.5% | | |

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy at **camosun.ca** or information on conversion to final grades, and for additional information on student record and transcript notations.

| Temporary Grade | Description |
|--------------------|--|
| I | Incomplete: A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family. |
| IP | In progress: A temporary grade assigned for courses that are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course. |
| CW | Compulsory Withdrawal: A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement. |

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy E-1.5 at **camosun.ca** for information on conversion to final grades, and for additional information on student record and transcript notations.

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 safe 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 LABORATORY ASSIGNMENTS

Each week there will be a laboratory assignment and a practice test. Each practice test is worth 1 of one percent which you will receive if you get 50% or better on the test. The weekly lab assignments are found in the assignments section of the course. Lab work will be done both outside of class and in lab time in a computer lab. Sometimes we will do the whole lab in the the lab hour, sometimes you will gather data outside of class and we will analyze the data and discuss the experiment or demonstration in the lab time.

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.

Material for the exams will be drawn from the "Goals" which are attached to each chapter's lecture notes.

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 in it and read the article.

This assignment should be 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.

Please read the Article Review Guidelines!

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 1250 (5 x 250) words exclusive of the title page, and reference list. It should include "several," around 10 sources is about average, 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.

Please read the Research Paper Guidelines!

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. This must be arranged and agreed to by both of us before the end of the second week of classes.

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