

Psychology 325

## **PHYSIOLOGICAL PSYCHOLOGY**

Fall, 2006

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Office Hours:	Monday	10:00 – 11:30
	Wednesday	10:00 - 11:30
	Thursday	10:00 – 11:30
	Tuesday & Friday	by appointment only.

If none of these times are convenient for you, other times may be arranged by appointment. Please feel free to call me at the phone numbers listed above or stop by my office to schedule an appointment.

Class Time:	Tuesday and Thursday
	2 <sup>nd</sup> period 8:50 – 10:00

Class Room:	235 PPHAC
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### Course Description and Objectives:

This course has been designed to introduce you to the subject matter and methods of physiological psychology. One main goal is to help you achieve a basic understanding of the physiological processes that underlie such important capacities as emotion, motivation, learning, and sensation. Our understanding of these processes is changing rapidly. This course should acquaint you with a current understanding of the topics. I hope that you will gain a genuine interest in biological approaches to the study of behavior so that you will continue to read and learn new information provided in the popular or scientific press after you leave this class and Moravian.

Course Description and Objectives (continued):

There is a second important goal for the class. I want you to become comfortable reading and evaluating journal articles in physiological psychology. Textbooks are a good way to obtain a general understanding of a field of study, but they are secondary references that are one step removed from the scientific investigations they review. You should learn to find, read, and evaluate original scientific investigations. Several of the assignments during the semester will cause you to use primary references.

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**Course Requirements**

1. Examinations:

1A. Lecture Exams

There will be three lecture exams given during the term. The lecture exams will cover all the material presented in the lectures and the material from the readings. All exams are non-cumulative. The first two exams will be given during normal class time (dates are listed on the outline below). The third exam will be given during the final exam period. These exams will generally consist of objective questions (multiple choice, T/F, etc.), several key concepts to be defined/explained, figures to be labeled/explained, and essay questions. Note: Exams will be given only on the days scheduled, and the only excuse for failing to take an exam is documented illness or death in the family. An unexcused absence from an exam will be recorded as a zero grade.

1B. Neuroanatomy/Methods Exam

The neuroanatomy section of the exam will be a practical exam involving the identification of structures (and their basic functions) on sheep brain preparations and diagrams of the human brain. The method section of the exam will involve a written test focusing on the identification and discussion of various research methods in physiological psychology. The neuroanatomy/ methods exams dates are listed in the outline below.

## 2. Literature Review Paper

The literature review paper should cover an area of physiological psychology that is we will not be covering in class. See chapters 6, 7, 8, 11, 12, 13 and 14 for topical ideas. The Literature Review paper is to be based on a minimum of six original research articles from 1990 - present. You are to discuss the literature on your topic by integrating the findings of the articles you have selected. Do not quote directly from your sources. I'm interested in your words not those of the authors of the papers. The literature review is to be written in APA style. Late papers will be devalued by 1/2 a letter grade for each day late.

You will submit portions of your paper in various forms:

1. Topic and three key references due on Thursday September 21<sup>st</sup>. You must submit the entire article.
2. Summary of the three key references due on Thursday October 12<sup>th</sup>.
3. Detailed paper outline due on Thursday October 26<sup>th</sup>. (Note: Your final paper must follow your outline format).
4. Final paper and presentation due on Tuesday November 21<sup>st</sup>. Your presentation should be 3-5 minutes in length.

## 3. Oral Presentations:

Students will share the responsibility of leading class discussions for the classes on the physiology of disorders. Each student will present on a topic for 15 minutes during one of the class sessions. The topics are specified on the course outline. Make sure that neurotransmitters and neuromodulators are a focus of each disorder (see chapter 4). Because there will be two students presenting on each topic, the two presentations must be well coordinated so that they are of adequate length and non-overlapping. Each discussion leader will be responsible for turning in a detailed outline of their presentation and a bibliography of useful references on the day of the presentation. Remember these outlines will be used by your classmates when studying for the exam on the physiology of disorders.

Each discussion leader must also select one-journal article related to their topic that all students must read. This article must be given to me one week prior to your presentation so that I can place it on reserve in the library. Late articles will result in the loss of 1/2 a letter grade on your presentation. Key material from the articles and the student presentations will be covered on the lecture exams. The students presenting should also be prepared to answer questions and lead a discussion on the topic.

The best way to prepare for your presentation would be to begin researching your topic at least two-three weeks prior to the class session. Read the assigned article and/or relevant section(s) of your text, come to my office to look at my books and articles on the topic and go to the library to obtain primary reference materials.

4. Attendance and Class Participation:

Attendance for the lecture and the laboratory sessions is expected. Missed classes will lower your grade. Material will be covered in the lecture that is not covered in assigned readings, and you will be held responsible for this material. The lectures are intended to supplement the readings. As such, the lectures will not duplicate the reading materials but will emphasize the most central aspects of the chapter and/or discuss particularly difficult concepts. The lectures will presuppose familiarity with the reading assignment for that lecture.

You are strongly encouraged to ask questions at any time during the class to help clarify points. The discussion of any portion of the class material is very much encouraged and welcomed. This class is small enough that everyone should be able to discuss the materials each session.

Evaluation:

Grades for this course will be determined according to your performance on the three lecture exams, the neuroanatomy/methods exam, the four components of the literature review paper, and your oral presentation and class participation.

Lecture Exams .....	40%
Neuroanatomy/Methods Exam.....	15%
Literature Review Paper.....	20%
Presentation.....	15%
Participation.....	10%

Policy on Plagiarism:

The Moravian College faculty has become increasingly concerned by the problem of plagiarism on campus. The Psychology Department's policy on this subject is important for students to understand. Simply put, plagiarism is the intentional misrepresentation of someone else's work as your own. This includes such diverse situations as quoting directly from a published work without giving the author credit, having your roommate write the paper, "borrowing" from fraternity or sorority files, buying a paper from a professional service, and so on. The policy of the department is that the student must keep all note cards and rough drafts on a paper until the grade is assigned. The instructor may request these materials, along with the source materials, at any time. Evidence of plagiarism will be dealt with in accordance with the College policy on academic honesty, copies of which are available at the departmental secretary's desk.

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Required Readings:

Carlson, N. R. (2007). Physiology of Behavior  
(9 th ed.). Allynson and Bacon Publishing Company.

Additional readings will be placed on reserve in the  
Reeves Library before each student presentation.

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### **SCHEDULE**

#### **DATE**

#### **TOPIC and REQUIRED READING**

**Aug. 29 (T)**

Organizational Meeting, Review Syllabus and Select  
Presentation Topics

**Aug. 31 (Th)**

Introduction to Physiological Psychology: The Major Issues

Chapter 1

**Sept. 5 (T)**

Cells of the Nervous System: Neurons and Supportive Cells

Chapter 2

**Sept. 7 (Th)**

Communication Within a Neuron: Resting and Action Potentials

Chapter 2

**Sept. 12 (T)**

Communication Between Neurons/ The Nature of the Synapse

Chapter 2

**Sept. 14 (Th)**

**Exam I**

**Sept. 19 (T)**

Neuroanatomy of the Sheep Brain Lab

Chapter 3

**Sept. 21 (Th)**

Neuroanatomy Lab: continued

Chapter 3

Literature review topic and three references are due.

**Sept. 26 (T)**

Neuroanatomy Lab: continued

Chapter 3

**Sept. 28 (Th)**

Research Methods in Physiological Psychology

Chapter 5

**Oct. 3 (T)**

Yom Kipper – no class

**Oct. 4-6**

**Neuroanatomy and Methods Exams**

**Oct. 10 (T)**

Fall Recess – no class

**Oct. 12 (Th)**

Psychopharmacology: Basic Principles

Chapter 4

Summary of three key references due

**Oct. 16 (T)**

Psychopharmacology: Sites of Drug Action

Chapter 4

**Oct. 19 (Th)**

Neurological Disorders

Chapter 5

Student Presentations:

Seizure Disorder  
Disorders of Development

**Oct. 24 (T)**

Neurological Disorders

Chapter 15

Student Presentations:

Parkinson's Disease  
Alzheimer's Disease

**Oct. 26 (Th)**

Disorders of Mood

Chapter 16

Student Presentations: Schizophrenia  
Affective Disorders

Detailed outline of Literature Review paper Due.

**Oct. 31 (T)**

Disorders of Moods Continued

Chapter 17

Student Presentations: Post-Traumatic Stress Disorder  
Obsessive-Compulsive Disorder

**Nov. 2 (Th)**

**Exam II**

**Nov. 7 (T)**

Biological Rhythms

Chapter 9

**Nov. 9 (Th)**

Function and Mechanisms of Sleep

Chapter 9

**Nov. 14 (T)**

Disorders of Sleep

Chapter 9

**Nov. 16 (Th)**

Sexual Development

Chapter 10

**Nov. 21 (T)**



**Literature review papers due – Paper Presentations**

**Nov. 23 (Th)**

No Class – Thanksgiving Break

**Nov. 27 (T)**

Hormonal Control of Sexual Behavior

Chapter 10

**Nov. 30 (Th)**

Neural Control of Sexual Behavior

Chapter 10

**Dec. 5 (T)**

Film: Biological Influences on Sexuality

**Dec. 7 (Th)**

Closure & Evaluations

**Finals Week**

**Exam III**