BIOLOGICAL BASIS OF BEHAVIOR
PSY 2010

Catalog Course Description:
Course includes basic anatomy of the brain and nervous system. Understanding the biological determinants of human behavior is the focus of study. Emphasized is the role of biological systems in learning, perception, emotion, memory and mental illness.

Entry Level Standards:
Must be able to read and write at the college level.

Prerequisites:
None

Textbook(s) and Other Reference Materials Basic to the Course:

I. Week/Unit/Topic Basis:

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>Global issues of Biological Psychology</td>
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<tr>
<td>2</td>
<td>Nerve cells and nerve impuls</td>
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<tr>
<td>3</td>
<td>Synapses and drugs</td>
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<tr>
<td>4</td>
<td>Anatomy of the nervous system</td>
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<tr>
<td>5</td>
<td>Development and evolution of the brain</td>
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<tr>
<td>6</td>
<td>Vision</td>
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<tr>
<td>7</td>
<td>Nonvisual sensory systems</td>
</tr>
<tr>
<td>8</td>
<td>Movement</td>
</tr>
</tbody>
</table>
Rhythms of wakefulness and sleep  
Regulation of internal states  
Hormones and sexual behavior  
Emotional behavior and stress  
Learning and memory  
Lateralization and language  
Biology of mood disorders, schizophrenia, and autism  
Final Exam Period

II. Course Objectives*:

A. Learn the structure and function of the nervous system. I.5, II.2  
B. Describe the major parts of the brain and describe their primary functions. I.5  
C. Explain the major brain systems involved in emotion, cognition, and behavior. I.5, III.2  
D. Read and write reports on current research in biological psychology. I.5, III.2  
E. View current audio-visual aids focusing on biological psychology. I.5, III.2  
F. Apply knowledge goals from course resources to personal and professional development. II.2  
G. Learn the various aspect of brain development III.2  
H. Identify major theories and theorists in Biological Psychology I.5

*Roman numerals after course objectives reference goals of the Natural and Behavioral Sciences department.

III. Instructional Processes*:

Students will:

1. Use teamwork to accomplish in class group activities utilizing knowledge of course concepts. Problem Solving and Decision Making Outcome, Active Learning Strategy  
2. Complete a research project demonstrating their ability to apply course content. Communication Outcome, Information Literacy Outcome, Active Learning Strategy, Transitional Strategy  
3. Use the World Wide Web and Pellissippi State library resources to access information for media reports, application papers, and oral presentations. Information Literacy Outcome, Technological Literacy Outcome  
4. Access available course software for study and review of concepts. Technological Literacy Outcome  
5. Respond orally or in writing to information given by guest speakers from the community.
Communication Outcome, Active Learning Strategy

*Strategies and outcomes listed after instructional processes reference Pellissippi State’s goals for strengthening general education knowledge and skills, connecting coursework to experiences beyond the classroom, and encouraging students to take active and responsible roles in the educational process.

IV. Expectations for Student Performance*:

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

1. Identify the structure of cells that make up the nervous system. A, G
2. Describe the function of cells that make up the nervous system. A, G
3. Describe the role of neurotransmitters in behavior, and how drugs affect behavior by affecting neurotransmitters. A
4. Identify the role that different regions in the brain and nervous system play in influencing behavior, mood, movement, cognition, memory, and perception. B, C, G
5. Label structures of the brain. A
6. Label structures of the nervous system. A
7. Label structures of the sensory systems. A
8. Identify the causes of disorders of mood, perception, movement, memory, and cognition. A, C
9. Identify the treatments of disorders of mood, perception, movement, memory, and cognition. A, C
10. Identify important theorists and researchers in biological psychology and be able to describe their theories, discoveries, and methods of investigation. H
11. Locate and evaluate current research materials (papers, book chapters, etc.) in biological psychology. D, F

*Letters after performance expectations reference the course objectives listed above.

V. Evaluation:

A. Testing Procedures: 83% of grade

Five 100 point examinations are scheduled for the semester. They may be objective, short answer, essay, or a combination of these methods of assessment. They encompass all lectures, discussions, audio/video presentations, and assigned readings. Test items will require recall, recognition, and application of content. Examination dates are in the Schedule of Instruction. No make-up exams will be given. An optional comprehensive final exam will be given during exam week to make up for a missed or low exam score. Your score on the final will substitute for a missing exam or your lowest test score.

B. Laboratory Expectations:

N/A

C. Field Work: 17% of grade
Choose one of the following projects to complete your field work.

1. Research paper:
You may write a research paper on an approved topic for 100 points of credit. The paper is due the 12th week of class. It must be between five and six pages in length, typed, double-spaced, with appropriate references. Topics must be submitted in writing during the 4th week of class. Approved topics include the following:
Animal research in biological psychology Sexual motivation
Behavioral medicine Sleeping and dreaming
Biofeedback Surgical control of behavior
Biological causes of mental illness Biological basis of learning
Brain disease Drugs and addiction
Emotion and physiology Genetic predispositions
Hunger and thirst Infant brain development
Left/right brain research Methods of research in biological
Psychoneuroimmunology psychology

2. Research Article Critiques:
You may write a set of four critiques of articles dealing with biological psychology topics. Topics may be chosen from those listed under Research Paper. Each critique should deal with a different topic and should be approximately 350-500 words, typed, double-spaced, with a copy of the article, and should include a title page. These critiques are also due the 12th week. Each is worth 25 points for a total of 100 points.

D. Other Evaluation Methods:

N/A

E. Grading Scale:

<table>
<thead>
<tr>
<th>Final Grade</th>
<th>Cumulative Points</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>540-600+</td>
<td>90%-100%</td>
</tr>
<tr>
<td>B+</td>
<td>510-539</td>
<td>85%-89%</td>
</tr>
<tr>
<td>B</td>
<td>480-509</td>
<td>80%-84%</td>
</tr>
<tr>
<td>C+</td>
<td>450-479</td>
<td>75%-79%</td>
</tr>
<tr>
<td>C</td>
<td>420-449</td>
<td>70%-78%</td>
</tr>
<tr>
<td>D</td>
<td>360-419</td>
<td>60%-69%</td>
</tr>
<tr>
<td>F</td>
<td>Below 360</td>
<td>Below 60%</td>
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</tbody>
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VI. Policies:

A. Attendance Policy:

Pellissippi State Technical Community College expects students to attend all scheduled instructional activities. As a minimum, students in all courses must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course.

B. Academic Dishonesty:

Each student is expected to do his/her own work. Cheating in any form (giving or receiving help on an exam, plagiarizing papers, etc.) will not be tolerated. The minimum penalty is a grade of “F” in the course. Cheating may also result in disciplinary sanctions from the
college.

C. Other Policies:

Submission of Assignments: Projects must be turned in by the due date in order to be available for full credit.