

|  |                      |                                    |                      |                    |                          |
|--|----------------------|------------------------------------|----------------------|--------------------|--------------------------|
| <b>Course Name:</b><br>Physiological<br>Psychology |                      | <b>Course Level:</b> Undergraduate |                      |                    | <b>Language:</b> English |
| <b>Course Code</b>                                 | <b>Prerequisites</b> | <b>Corequisites</b>                | <b>(T + P hours)</b> | <b>ECTS Credit</b> | <b>Type</b>              |
| PSYC3505   | -                    | -                                  | 3+0                  | 5                  | Elective                 |

**Course objectives:** To introduce the human central nervous system, physiological bases of behavior and psychological processes in the brain.

**Course description:** Analysis of the central nervous system, origins of physiological psychology, information processing and decision making. Describe the functioning of the nervous system on learning, thinking, reasoning and memory. Emphasis on physiological aspects of perception, attention, learning, memory, motor functions, emotion, sleep, motivation, arousal, language development, sexual behavior, instinctive behavior and chronobiology. Comparison between biological psychology, cognitive psychology, neuroscience and consciousness.

**Evaluation system (in percentages):**

| Midterm | Quiz (2, for each one %15) | Final | Total |
|---------|----------------------------|-------|-------|
| %30     | %30                        | %40   | 100   |

## Reference

Carlson, N. (2005), *Fundamentals of Physiological Psychology*. Uni. Of Massachusetts, 6 th Edition.

## Weekly Course Topics

| Week | Topic  |
|------|--|
| 1.   | Course Introduction  |
| 2.   | Introduction to physiological psychology                           |
| 3.   | Neuroanatomy 1   |
| 4.   | Neuroanatomy 2   |
| 5.   | Quiz - Membrane potential - action potential - Transmitter systems |
| 6.   | Brain development and its regions                                  |
| 7.   | Physiological measurements: EEG, MRI                               |
| 8.   | Midterm  |
| 9.   | Sensory perception, visual-spatial functions                       |
| 10.  | Learning and memory  |

|     |                               |
|-----|-------------------------------|
| 11. | Sleep-wake cycle, homeostasis |
| 12. | Emotion and stress            |
| 13. | Functional lateralization     |
| 14. | Final                         |

### **Contribution of the Course to the Program Outcomes**

#### **Course Outcomes**

Students will gain the following knowledge and skills at the end of the course:

1. Describe the anatomical distinctions in the brain.
2. Identify different brain areas and their functions.
3. Explain the brain structures role in different cognitive, emotional and behavioral processes.
4. Discuss the effect of damage in different brain structures on behavior.

|    | <b>Program Outcomes</b>  | <b>CO1</b> | <b>CO2</b> | <b>CO3</b> | <b>CO4</b> |
|----|--|------------|------------|------------|------------|
| 1. | To examine and compare different concepts in subfields of psychology and to have basic application skills.   | X          | X          | X          |            |
| 2. | To apply analytical and critical thinking skills in various fields of psychology, to be able to solve the problems related to the field with contemporary methods. |            |            | X          | X          |

|    |  |  |  |  |  |
|----|--|--|--|--|--|
| 3. | The student has the skills to interpret facts, events and data, to define and analyze problems, to develop solutions based on research and evidence by using the knowledge and skills they have acquired in the field. |  |  |  |  |
| 4. | Discussing and criticizing professional and ethical issues in program design and professional practice.  |  |  |  |  |
| 5. | To explain the procedures and rules in psychological measurement and interview techniques, and to develop the ability to apply them at a basic level.  |  |  |  |  |
| 6. | Adopting the rules of the positivist method and designing scientific research, collecting data, analyzing data and scientifically reporting the results.   |  |  |  |  |
| 7. | To gain the basic principles of scientific thinking, to be able to separate and / or integrate the knowledge gained by other disciplines with a critical point of view.  |  |  |  |  |
| 8. | To develop the competence for using the necessary information and communication technologies used to reach and spread information.   |  |  |  |  |
| 9. | To use oral and written communication skills effectively both in Turkish and at least one foreign language.  |  |  |  |  |

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|-----|--|--|--|--|--|
| 10. | Working effectively in individual and multidisciplinary research teams.                        |  |  |  |  |
| 11. | To develop respect for interpersonal and cultural diversity and to have social responsibility. |  |  |  |  |
| 12. | To be aware of psychological resilience, personal and professional development.                |  |  |  |  |

| Course Evaluation and ECTS Workload |               |                   |      |
|-------------------------------------|---------------|-------------------|------|
| Types of Work                       | Number        |                   |      |
|                                     |               |                   |      |
|                                     | ECTS Workload |                   |      |
|                                     |               | Time              |      |
| Attendance                          | 14            | 3                 | 42   |
| Final exam                          | 1             | 20                | 20   |
| Quizzes                             | 5             | 2                 | 10   |
| Semester project                    | 0             | 0                 | 0    |
| Assignments                         | 0             | 0                 | 0    |
| Final project                       | 0             | 0                 | 0    |
| Seminar                             | 0             | 0                 | 0    |
| Duties                              | 0             | 0                 | 0    |
| Presentation                        | 0             | 0                 | 0    |
| Midterm                             | 1             | 20                | 20   |
| Project                             | 0             | 0                 | 0    |
| Lab                                 | 0             | 0                 | 0    |
| Private lesson time                 | 0             | 0                 | 0    |
| Other (Personal study)              | 14            | 3                 | 42   |
|                                     |               | Total workload    | 134  |
|                                     |               | Total workload/25 | 5.36 |
|                                     |               | ECTS Credit       | 5    |

**Teaching Methods and Techniques:** Lecture, Discussion, Homework

**Prepared By:**

**Date:**