FOUNDATIONS OF PSYCHOBIOLOGY I – Code 800140
Academic Year 2018-19

COURSE INFORMATION

Undergraduate Studies: 0812 – Degree in Psychology (Studies Plan 2009-10)
Type: Compulsory
ECTS: 6.0
Module: Basic training
Area: Biology
Year: First
Semester: 1

INSTRUCTOR INFORMATION

Name: Professor Fernando Colmenares and Dr Pilar Casado Martínez
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Office number: School of Psychology, Building II, Office 2008-G
Office hours: Mondays and Wednesdays from 14:00 to 15:00 and Thursdays from 13:00 to 15:00

SYNOPSIS

COMPETENCIES

General competencies

GC4: Know and understand the biological foundations of human behaviour and psychological functions.

Transversal competencies

TC1: Analysis and synthesis.
TC2: Preparation and defence of properly reasoned arguments.
TC5: Looking for information and data interpretation on social, scientific and ethical topics related to the field of Psychology.
TC7: Critical thinking and self-analysis.
TC9: Communication skills, learning how to communicate ideas to both, professional and non-professional audiences.

Specific competencies

SC4: Be able to describe and measure variables (personality, intelligence and other aptitudes, attitudes, etc.) and cognitive, emotional, psychobiological and behavioural processes.

TEACHING ACTIVITIES

The course comprises lectures, seminars, practical sessions (including small-group activities in the class/computer room and field work), student presentations, and online activities. There will also be complementary face-to-face (individual and group) and internet tutorial teaching available.
ECTs break-down (1 ECTS= 25 hours)

<table>
<thead>
<tr>
<th>TEACHING ACTIVITIES</th>
<th>Hours (150)</th>
<th>% of total credits</th>
<th>Attendance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class sessions</td>
<td>46</td>
<td>31</td>
<td>100%</td>
</tr>
<tr>
<td>Tutorials</td>
<td>30</td>
<td>20</td>
<td>50%</td>
</tr>
<tr>
<td>Students’ work (class assignments, field work, class presentations, and time of study)</td>
<td>68</td>
<td>46</td>
<td>100%</td>
</tr>
<tr>
<td>Assessment activities</td>
<td>6</td>
<td>8</td>
<td>100%</td>
</tr>
</tbody>
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**BRIEF DESCRIPTION:**

The course is organized around five major module topics: concept and method of psychobiology, evolution, development and inheritance, comparative and evolutionary psychology, and principles of cell signalling and transmission in the nervous system.

**PRE-REQUISITES**

None, although basic training in biology and psychology will be helpful.

**OBJECTIVES**

At the end of the course, students are expected to know and understand a set of basic concepts and theories about the integrative biology of behaviour which enable them to appreciate the scope and importance of psychobiology. They are also expected to master the skills needed to apply their knowledge for developing critical thinking about and analysing human behaviour from both proximate and ultimate perspectives.

**TOPICS**

**MODULE I. CONCEPT AND METHOD OF PSYCHOBIOLGY**

Unit 1. Concept of psychobiology.

Unit 2. Method and techniques of psychobiology.

**MODULE II. EVOLUTION**

Unit 3. Evolutionary thinking and evolutionary theories.

Unit 4. Evolutionary mechanisms, processes and outcomes.

Unit 5. Biodiversity, phylogeny and evolutionary transitions.

Unit 6. Patterns and processes in human evolution.

**MODULE III. DEVELOPMENT AND INHERITANCE**

Unit 7. Principles of development and inheritance.

Unit 8. Genes, organism, and environment.

Unit 9. Genetic and epigenetic inheritance, parental effects, and ecological and cultural inheritance.
MODULE IV. Behaviour and Psychological Processes in Evolutionary Context

Unit 10. Behaviour, psychological profile, health and survival.
Unit 11. Reproduction and sexual and parental behaviour.
Unit 12. Social behaviour, communication, and sociality.
Unit 13. Behaviour, emotion, and cognition.

MODULE V. FOUNDATIONS OF CELL SIGNALING AND COMMUNICATION IN THE NERVOUS SYSTEM

Unit 15. Generation, transmission, and integration of neural signals.
Unit 16. Neurotransmitters and principles of drug action.

ASSESSMENT

Student’s knowledge and level of achievement of required learning objectives and outcomes will be assessed via multiple-choice tests. There will be 2 tests per module (except module 5), one at the end of each module and the other when the course is done. There will be a pass mark per module and each module will make a different contribution to the overall module mark, based on each module’s content material. The overall module mark will represent 70-80% of the final course mark. The remaining 20-30% contribution will be the cumulative mark for such student activities as practical sessions, presentations, field work, and online activities (forum contributions).

The final grading will be as follows:

0-4.9: fail (SS).
5.0-6.9: pass (AP).
7.0-8.9: very good (NT).
9.0-10: outstanding (SB).
10 with distinction (MH)

RESOURCES

Textbooks

Basic references


Supplementary references
