Description: Physiological Psychology

<table>
<thead>
<tr>
<th>Subject</th>
<th>Cat-nbr</th>
<th>Class</th>
<th>Term</th>
<th>Mode</th>
<th>Units</th>
<th>Campus</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY</td>
<td>3090</td>
<td>66326</td>
<td>2, 2007</td>
<td>EXT</td>
<td>1.00</td>
<td>Toowoomba</td>
</tr>
</tbody>
</table>

Academic group: FOSCI

Academic org: FOS005

Student contribution band: 1

ASCED code: 090701

STAFFING

Moderator: Tony Machin

REQUISITES

Pre-requisite or Co-requisite: PSY1020 or BIO1203 or MAT1100

RATIONALE

Psychologists and neuroscientists need to appreciate the fundamental relationship between the mind and the body, specifically the nervous system and the brain, in order to fully understand the implications of the body’s structure and composition on behaviour. Clinical decisions will need to consider this too; and clinical presentations can occur in every aspect of psychological practice. Successful clinical psychology will also include an understanding of cognitive neuroscience, which rests on many of the items herein. Understanding the experimental methodologies underscores the validity of the physiological interpretations that presently exist. This course provides students with an understanding of the influences that both biological factors and experiences have on human behaviour. Students will learn that material substances govern our thinking: that the mind and the brain are the same.

SYNOPSIS

The first three modules of the course examine the basic physiology of the brain and nerves: their structure, composition, the electro-chemical events that take place and the techniques used to study and thereby understand the relevant physiology. The next four modules examine the physiology of perception, attention, learning and memory: ‘Human Information Processing’, or how the nervous system acquires, stores and retrieves useful information. The next two modules consider the purpose of thought being action: how it is controlled and planned. Finally two more modules complete the course with emotion: how physiology influences why we do things; and consciousness: how it is that we are aware of ourselves.

OBJECTIVES

On successful completion of this course students will demonstrate:
1. knowledge of the anatomy, physiology, and function of the central nervous system; appreciate the mechanism of neurotransmitter action and its relationship to behaviour (Exam);
2. an appreciation of the methods used to understand brain physiology and behaviour (Exam);
3. a comprehension of the physiology of perception, attention, learning and memory (Exam);
4. knowledge of the control of action and goal oriented behaviour (Exam);
5. an understanding of emotions and consciousness (Exam);
6. an ability to plot data in a physiology report (Assignment 1 and Assignment 2);
7. an ability to calculate and apply statistics in a physiology report (Assignment 1 and Assignment 2);
8. an ability to write with good style clearly, logically, sequentially with correct spelling, punctuation and grammar (Assignment 1 and Assignment 2);
9. an ability to adhere to APA style in a physiology report (Assignment 1 and Assignment 2).

**TOPICS**

<table>
<thead>
<tr>
<th>Description</th>
<th>Weighting (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The Cellular and Molecular Basis of Cognition</td>
<td>5.00</td>
</tr>
<tr>
<td>2. Gross and Functional Anatomy of Cognition</td>
<td>5.00</td>
</tr>
<tr>
<td>3. Methods of Cognitive Neuroscience</td>
<td>5.00</td>
</tr>
<tr>
<td>4. Perception and Encoding</td>
<td>5.00</td>
</tr>
<tr>
<td>5. Higher Perceptual Functions</td>
<td>5.00</td>
</tr>
<tr>
<td>6. Selective Attention and Orienting</td>
<td>5.00</td>
</tr>
<tr>
<td>7. Learning and Memory</td>
<td>5.00</td>
</tr>
<tr>
<td>8. Language and the Brain</td>
<td>5.00</td>
</tr>
<tr>
<td>9. The Control of Action</td>
<td>5.00</td>
</tr>
<tr>
<td>10. Executive Functions and Frontal Lobes</td>
<td>5.00</td>
</tr>
<tr>
<td>11. Emotion</td>
<td>5.00</td>
</tr>
<tr>
<td>12. The Problem of Consciousness</td>
<td>5.00</td>
</tr>
<tr>
<td>13. Write-up of Physiology Experiments</td>
<td>40.00</td>
</tr>
</tbody>
</table>

**TEXT and MATERIALS required to be PURCHASED or ACCESSED**

ALL textbooks and materials are available for purchase from USQ BOOKSHOP (unless otherwise stated). Orders may be placed via secure internet, free fax 1800642453, phone 07 46312742 (within Australia), or mail. Overseas students should fax +61 7 46311743, or phone +61 7 46312742. For costs, further details, and internet ordering, use the 'Textbook Search' facility at http://bookshop.usq.edu.au click 'Semester', then enter your 'Course Code' (no spaces).

REFERENCE MATERIALS

Reference materials are materials that, if accessed by students, may improve their knowledge and understanding of the material in the course and enrich their learning experience.


(CD Set)


(EEG Reference)


(EEG Reference)


Suzuki, David 1997, *The Brain: Our Universe Within*, , Discovery Channel, Bethesda. (Video-recording (two tapes, four programs), 612.82 Bra. USQ Psychology Library)


## STUDENT WORKLOAD REQUIREMENTS

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>HOURS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment</td>
<td>30.00</td>
</tr>
<tr>
<td>Examinations</td>
<td>2.00</td>
</tr>
<tr>
<td>Private Study</td>
<td>128.00</td>
</tr>
</tbody>
</table>

## ASSESSMENT DETAILS

<table>
<thead>
<tr>
<th>Description</th>
<th>Marks out of</th>
<th>Wtg(%)</th>
<th>Due date</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASSIGNMENT 1</td>
<td>30.00</td>
<td>10.00</td>
<td>27 Aug 2007</td>
</tr>
<tr>
<td>ASSIGNMENT 2</td>
<td>30.00</td>
<td>30.00</td>
<td>08 Oct 2007</td>
</tr>
<tr>
<td>2HR CLOSED (M/C) EXAM</td>
<td>60.00</td>
<td>60.00</td>
<td>END S2 (see note 1)</td>
</tr>
</tbody>
</table>

### NOTES

1. Examination dates will be available during the semester. Please refer to the examination timetable when published on the usq website.

### IMPORTANT ASSESSMENT INFORMATION

1. Attendance requirements:
   - It is the students' responsibility to actively participate in all classes scheduled for them, and to study all material provided to them or required to be accessed by them to maximize their chance of meeting the objectives of the course and to be informed of course-related activities and administration. External students are very welcome to attend on-campus mode workshops. Attendance at residential school is voluntary, but offers an important learning experience that should be undertaken where possible.

2. Requirements for students to complete each assessment item satisfactorily:
   - To satisfactorily complete an assessment item a student must achieve at least 50% of the marks or a grade of at least C-. Refer to Statement 4 below for the requirements to receive a passing grade in this course.

3. Penalties for late submission of required work:
   - If students submit assignments after the due date without prior approval then a penalty of 10% of the total marks available for the assignment will apply for each working day late.

4. Requirements for student to be awarded a passing grade in the course:
   - To be assured of receiving a passing grade a student must achieve at least 50% of the total weighted marks available for the course.

5. Method used to combine assessment results to attain final grade:
   - The final grades for students will be assigned on the basis of the weighted aggregate of the marks obtained for each of the summative assessment items in the course.

6. Examination information:
   - In a Closed Examination, candidates are allowed to bring only writing and drawing instruments into the examination.

7. Examination period when Deferred/Supplementary examinations will be held:
   - Any Deferred or Supplementary examinations for this course will be held during the examination period at the end of the semester of the next offering of this course.
8 University Regulations:
Students should read USQ Regulations 5.1 Definitions, 5.6. Assessment, and 5.10 Academic Misconduct for further information and to avoid actions which might contravene University Regulations. These regulations can be found at the URL http://www.usq.edu.au/corporateservices/calendar/part5.htm or in the current USQ Handbook.

ASSSESSMENT NOTES

9 The due date for an assignment is the date by which a student must despatch the assignment to the USQ. The onus is on the student to provide proof of the despatch date, if requested by the Examiner.

10 Students must retain a copy of each item submitted for assessment. This must be produced within two days if required by the Examiner.

11 The examiner may grant an extension of the due date of an assignment in extenuating circumstances.

12 As one objective is that students demonstrate the ability to write up physiological experiments from observation of an experiment (provided via the web), students will need internet access as well as access to the discussion group via USQ Study Desk.

13 Supplementary assessment will be available for the first two assignments/assessments'.

OTHER REQUIREMENTS

1 Access to email, discussion groups and the internet is a departmental requirement. Students will be expected to open their university provided study desk email accounts and to check them regularly for personal communication. Information sent this way will be regarded as being received. [Note, other accounts often have more limited sized mail boxes, are not accessible when the USQ external connection is down and may not always remain open throughout student's candidature.]