PSYC2111 – Learning, Neuroscience and Perception

Unit of Study Code: PSYC2111

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Format of Unit:
2 x 1 hour lectures/week x 13 weeks
1 x 1 hour tutorial/week x 12 weeks
Tutorial sizes: maximum of 20 students per group

Credit Point Value: 4 Credit Points

Qualifying:
12 credit points of First Year Psychology including PSYC 1001 and PSYC 1002

Assessment:
Classwork:
25% of total mark: 1,000 words Laboratory Report
Due Date: (Week 10)

25% of total mark: Tutorial Quiz
(Week 13)

Examination:
50% of total mark: Multiple-choice questions

Unit of study general description:
The first half of the course (13 lectures) expands on topics introduced in first year Learning and Motivation, with an emphasis on behavioural principles and findings which have important practical implications.
The second half of the course (13 lectures) follows first year Psychobiology and Sensory Systems, developing a number of themes from that course and introducing new ones. The emphasis is on understanding the brain mechanisms underlying behaviour, perception and cognition.

Teaching outcomes:

1. Understanding basic properties of conditioning, especially instrumental learning.
2. Understanding some of the neurochemical bases of reinforcement, addiction and anxiety.
3. Understanding comparative studies of complex learning, problem solving and memory.
4. Awareness of the relationship between theoretical research and practical applications of behavioural and physiological findings.
5. Understanding basic processes of human visual perception and perception of emotion
6. Understanding basis properties of affection
7. Understanding the basics of human brain imaging techniques
8. Understanding the neural basis of human communication
9. Awareness, and some hands-on experience, of animal-based behavioural research.
10. Skill in reporting experimental work using standard conventions
Evidence of learning:

Achieving a Pass standard in the examination demonstrates success in achieving outcomes 1 – 8. In addition, successful achievement of Outcomes 1, 9 and 10 is shown by completion of the laboratory report at a Pass standard and of Outcomes 2, 4, 5, 6, 7 and 8 by a Pass mark in the Tutorial Quiz.

SYLLABUS

Fundamental principles of instrumental conditioning based on animal research, involving both positive and aversive events, and their neural and pharmaceutical bases; social learning; fear, anxiety and stress; applications of research on learning; comparative studies of memory and other cognitive processes; psychopharmacology of addiction and of anxiety; olfactory systems; human visual perception of objects and faces, and underlying brain mechanisms; communication and expression of emotion, and their neural bases.

TEXT

There is no required textbook for this course. However, it is highly recommended that students obtain copies of two books. References to these will be given in lectures.

(This text will be particularly useful in Weeks 1–7 and will also be used in the 3rd Year course on ‘Learning and Motivation’)

(This text will be particularly useful in Weeks 7–13 and will also be used in the 3rd Year course on ‘Behavioral Neuroscience’)

REFERENCES

Where possible references for lecture and tutorial material will be from the two texts above. In addition, some reference will be made to the following sources:

