PSYC3011 – Learning and Behaviour

Unit of Study Code: PSYC3011

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Format of Unit:
2 x 1 hour lectures/week x 13 weeks
1 x 2 hour tutorial/week x 10 weeks
Tutorial classes: maximum of 20 students per group

Credit Point Value:
6 Credit Points

Prerequisites:
PSYC2011 (or PSYC2111 / PSYC2911)
plus at least one other Intermediate Psychology Unit from PSYC2012 / 2112, PSYC2013 / 2113, PSYC2014 / 2114.

Assessment:
Tutorial quizzes held throughout semester: 20% of total mark of the Unit

Assignment*: 2000 word practical report (due BEFORE 4PM on Tuesday, 19th May, 2014): 30% of total mark of the Unit

Final Examination*: 2hr exam (multiple-choice and written-answer questions): 50% of total mark of the Unit

*Completion of these assessments is compulsory to pass this unit. Students who fail to complete any of these components will receive an Absent Fail, regardless of their marks in other assessments.

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Unit of study general description:

PSYC3011 addresses the fundamental concepts and more important research findings related to contemporary theories of associative learning in animals and humans. It examines the application of such fundamental research to issues such as drug use, phobias and food choice. It is designed to foster skills in reading primary sources in this area, and provide the opportunity for hands-on experience in research projects in this area.

Graduate Attributes & Student Learning Outcomes.

This course is structured around the graduate attributes associated with the scientist-practitioner model, the basis for the training of psychologists in Australia and internationally. Graduate Attributes are the generic skills, abilities and qualities that students should acquire during their university experience and the School of Psychology is committed to providing an environment to promote these skills. In addition, this unit of study will provide students with generalised and transferable skills that will also be useful in careers outside psychology. The following graduate attributes and student learning outcomes will be developed through lectures, tutorial and assessment activities in particular. They will be assessed primarily in the report, tutorial quizzes, and in the final examination.

1: Core knowledge and understanding

Display basic knowledge and understanding the major concepts, theoretical perspectives, empirical findings, and historical trends in the study of learning and behavior.

Student learning outcomes:

(i) Learn about basic behavioural phenomena that reveal the conditions under which learning occurs and the content of that learning.
(ii) Understand major theoretical models that describe mechanisms for associative learning, and to appreciate the role of theory in the generation of knowledge in learning.
(iii) An appreciation of the historical and current contribution of learning theorists, to the understanding of human and animal behaviour.
(iv) An appreciation for how learning relates to basic motivational processes.
(v) An appreciation of the complex relationship between learning and human cognition.
(vi) Recognise issues specifically related to the study of learning in humans and how simple associative learning theory relates to human behavior in a variety of clinical and everyday settings.

2: Research methods in psychology.

Understand, apply and evaluate basic research methods in learning and behaviour, including research design, data analysis and interpretation.

Student learning outcomes:

(i) An ability to describe, apply and evaluate the different research methods used by learning psychologists.
(ii) Design and conduct basic studies to address psychological questions related to learning and behaviour, including: framing a research question; undertaking a literature review; critically analysing theory and empirical studies; formulate testable hypotheses; operationalise variables; describe an appropriate methodology; analyse data and interpret results; as assessed by the writing of a practical report based on research conducted in class.
(iii) Demonstrate practical skills in laboratory-based human learning research.
3: Critical thinking skills.

Respect and use critical and creative thinking, sceptical inquiry, and the scientific approach to solve problems related to learning and behaviour.

Student learning outcomes:

(i) Apply knowledge of the scientific method in thinking about problems related to behaviour and psychological processes involved in learning in humans and other animals.
(ii) Evaluate the quality of information, including differentiating empirical evidence from speculation, and differentiating between observations of behaviour and conclusions inferred about psychological processes.
(iii) Question claims that arise from myth, stereotype, pseudoscience or untested assumptions.
(iv) Demonstrate an attitude of critical thinking that includes persistence, open-mindedness, and intellectual engagement.

4: Values, research and professional ethics.

Value empirical evidence; act ethically and professionally; and understand the complexity of sociocultural and international diversity.

Student learning outcomes:

(i) Use information in an ethical manner, including acknowledging and respecting the work and intellectual property rights of others through appropriate citations in oral and written communication.
(ii) Promote evidence-based approaches and rigour in the understanding of behaviour.
(iii) Be aware of ethical issues pertaining to the application of learning theory to human behaviour and to human and animal experimentation.

5: Communication skills.

Communicate effectively in a variety of formats and in a variety of contexts

Student learning outcomes:

(i) Write a standard research report using American Psychological Association (APA) structure and formatting conventions.
(ii) Contribute to class discussion and participate in learning demonstrations as experimenter and subject.

Evidence of learning:

Achieving a Pass standard in the Exam demonstrates success in achieving the learning outcomes 1(i-vi), 2(i-ii), 3(i-iii).

Achieving a Pass standard in the Laboratory Report demonstrates success in achieving learning outcomes 1(i-vi), 2(i-ii), 3(i-ii), 4(i) and 5(i).

Achieving a Pass standard in the Tutorial Quizzes demonstrates successful achievement of Outcomes 1(i-vi), 2(i-ii), 3(i-ii).

Learning outcomes 2(iii), 3(iii-iv), 4(ii-iii) and 5(ii) are not directly assessed in PSYC3011.
Syllabus

History of learning and comparative psychology:
- Darwin and mental evolution
- Comparative psychology
- Behaviourism
- Early learning theory

The nuts and bolts of conditioning:
- The content of conditioning
- Conditions necessary for conditioning
- Inhibitory learning

Associative learning phenomena
- Blocking and overshadowing
- Relative cue validity
- Conditioned Inhibition
- Latent Inhibition

Perception, attention and discrimination
- Perceptual learning
- Selective attention and learning
- Discrimination and generalization

Theories of associative learning
- Formal models of learning
- The Rescorla-Wagner model

Human associative learning
- Learning and causal reasoning
- Cognition and conditioning
- The placebo effect
- Learning and drug use

Flavour learning and evaluative conditioning

Social Learning

Tutorial Programme

Starting in Week 2, ten 2-hour tutorials will be held at which students will participate in a variety of research projects and exercises investigating different issues related to associative learning. The 2,000-word report is based on one of these projects. Most tutorial projects involve participation and discussion across at least two tutorials. Further details of this content will be made available to students during semester and students should regularly check the online resources for this unit for tutorial-relevant content. The tutorial program will include projects/exercises on the following:

1. Critical thinking in the context of exam and report writing
2. Computational models of learning
3. Discrimination and categorization
4. Causal learning
5. Homeostasis and drug tolerance
6. Effects of testing on learning and memory
7. Trial spacing and learning

Four tutorial quizzes will be conducted during Weeks 4, 7, 9, and 12 of Semester. The quizzes are multiple-choice format and will assess lecture and tutorial content. Note that the timing of the tutorial quizzes is subject to change and all dates will be confirmed in lectures and online prior to each assessment.

Note: Tutorials will be held in every week of semester EXCEPT weeks 1, 5 and 13.

NOTE: Attendance at the tutorials is compulsory. The quizzes and exam will assess content from both lectures and tutorials, including material covered solely in the tutorial program. The quizzes are worth 20% of the total mark.

NOTE: The research report will be analysed by plagiarism detection software. Further information about submission of the report will be covered in lectures and will be available online.
Lecture Programme

Students are expected to attend two 1-hr lectures each week (weeks 1 to 13). Lectures are at 10am on Mondays and 10am on Wednesdays.

Below is a provisional lecture timetable, showing the title of each lecture and the name of the lecturer (note: the scheduling of topics may change from that shown below).

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Lec #</th>
<th>Lecturer</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mar 2</td>
<td>L 1</td>
<td>Livesey</td>
<td>Introduction to learning and behaviour.</td>
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<tr>
<td></td>
<td>Mar 4</td>
<td>L 2</td>
<td>Boakes</td>
<td>Darwin and mental evolution.</td>
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<tr>
<td>2</td>
<td>Mar 9</td>
<td>L 3</td>
<td>Boakes</td>
<td>Comparative psychology and early Behaviourism.</td>
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<tr>
<td></td>
<td>Mar 11</td>
<td>L 4</td>
<td></td>
<td>Early learning theory: Pavlov, Hull and Tolman.</td>
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<tr>
<td>3</td>
<td>Mar 16</td>
<td>L 5</td>
<td>Boakes</td>
<td>Skinner’s operant psychology vs associative learning theory.</td>
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<tr>
<td></td>
<td>Mar 18</td>
<td>L 6</td>
<td>Harris</td>
<td>The content of conditioning.</td>
</tr>
<tr>
<td>4</td>
<td>Mar 23</td>
<td>L 7</td>
<td>Harris</td>
<td>The conditions necessary for conditioning: contiguity.</td>
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<tr>
<td></td>
<td>Mar 25</td>
<td>L 8</td>
<td></td>
<td>The conditions necessary for conditioning: contingency.</td>
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<tr>
<td>5</td>
<td>Mar 30</td>
<td>L 9</td>
<td>Harris</td>
<td>Theories of conditioning: Variations in associability of the CS or US.</td>
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<tr>
<td></td>
<td>April 1</td>
<td>L 10</td>
<td></td>
<td>The Rescorla-Wagner model.</td>
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<tr>
<td>6</td>
<td>April 13</td>
<td>L 11</td>
<td>Harris</td>
<td>The effects of non-reinforcement: extinction.</td>
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<td></td>
<td>April 15</td>
<td>L 12</td>
<td></td>
<td>Conditioned inhibition – its role in extinction.</td>
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<tr>
<td>7</td>
<td>April 20</td>
<td>L 13</td>
<td>Harris</td>
<td>Latent inhibition.</td>
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<tr>
<td></td>
<td>April 22</td>
<td>L 14</td>
<td>Livesey</td>
<td>Perceptual learning.</td>
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<tr>
<td>8</td>
<td>April 27</td>
<td>L 15</td>
<td>Livesey</td>
<td>Discrimination and generalization.</td>
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<tr>
<td></td>
<td>April 29</td>
<td>L 16</td>
<td></td>
<td>Learning and attention.</td>
</tr>
<tr>
<td>9</td>
<td>May 4</td>
<td>L 17</td>
<td>Livesey</td>
<td>Contingency learning and causal reasoning.</td>
</tr>
<tr>
<td></td>
<td>May 6</td>
<td>L 18</td>
<td></td>
<td>Conditioning and cognition.</td>
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<tr>
<td>10</td>
<td>May 11</td>
<td>L 19</td>
<td>Boakes</td>
<td>Food aversion learning.</td>
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<tr>
<td></td>
<td>May 13</td>
<td>L 20</td>
<td></td>
<td>Flavour preference learning and evaluative conditioning.</td>
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<tr>
<td>11</td>
<td>May 18</td>
<td>L 21</td>
<td>Colagiuri</td>
<td>The Placebo effect I.</td>
</tr>
<tr>
<td></td>
<td>May 20</td>
<td>L 22</td>
<td></td>
<td>The Placebo effect II.</td>
</tr>
<tr>
<td>12</td>
<td>May 25</td>
<td>L 23</td>
<td>Colagiuri</td>
<td>Learning and drug use.</td>
</tr>
<tr>
<td></td>
<td>May 27</td>
<td>L 24</td>
<td></td>
<td>Other applications of learning.</td>
</tr>
<tr>
<td>13</td>
<td>June 1</td>
<td>L 25</td>
<td>Harris</td>
<td>Social learning.</td>
</tr>
<tr>
<td></td>
<td>June 3</td>
<td>L 26</td>
<td></td>
<td>Social learning.</td>
</tr>
</tbody>
</table>
Equipment

Some tutorials will require students to bring a calculator. Students may also find it useful to have a USB memory stick for saving assignment and tutorial data.

Reading

The main text for the Learning component of Psychology 2 is suitable for many of the lecture topics:


Alternative textbooks (with copies in Fisher Undergraduate Library) that may sometimes be useful include:

  See also later editions by Schwartz & Robbins (1995), and Schwartz, Wasserman & Robbins (2001)

Psychology material in high demand

Reserve 2 Hour Loan (located on Level 3 of Fisher Library) is a collection of required and recommended items on Psychology reading lists that are only available in print format. A list of Reading material available electronically for your unit can be searched by unit of study or lecturer via the catalogue:

http://opac.library.usyd.edu.au/search/r
Completion of compulsory assessments is necessary to pass this unit. Students who fail to complete any of these components will receive an Absent Fail, regardless of their marks in other assessments.

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**PSYC3011 Assessment Summary**

<table>
<thead>
<tr>
<th>What?</th>
<th>When?</th>
<th>When Returned?</th>
<th>% Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tutorial Quiz #1</td>
<td>Week 4 (23-27\textsuperscript{th} March) in tutorials – you must attend your allocated tutorial</td>
<td>Marks returned in the tutorial the following week</td>
<td>5%</td>
</tr>
<tr>
<td>Tutorial Quiz #2</td>
<td>Week 7 (20-24\textsuperscript{th} April) in tutorials – you must attend your allocated tutorial</td>
<td>Marks returned in the tutorial the following week</td>
<td>5%</td>
</tr>
<tr>
<td>Tutorial Quiz #3</td>
<td>Week 9 (4-8\textsuperscript{th} May) in tutorials – you must attend your allocated tutorial</td>
<td>Marks returned in the tutorial the following week</td>
<td>5%</td>
</tr>
<tr>
<td>Tutorial Quiz #4</td>
<td>Week 12 (25-29\textsuperscript{th} May) in tutorials – you must attend your allocated tutorial</td>
<td>Marks returned in the tutorial the following week</td>
<td>5%</td>
</tr>
<tr>
<td>Assignment Compulsory</td>
<td>Online <strong>BEFORE</strong> 4pm on Tuesday 19\textsuperscript{th} May</td>
<td>On-time submissions returned 4pm Tuesday 9\textsuperscript{th} June*</td>
<td>30%</td>
</tr>
<tr>
<td>*NB – this is the last possible date and time for submission of the assignment with or without extensions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exam Compulsory</td>
<td>During exam period at the end of semester</td>
<td>University Final Results Release Date</td>
<td>50%</td>
</tr>
</tbody>
</table>

**Total** 100%