



UNSW
THE UNIVERSITY OF NEW SOUTH WALES

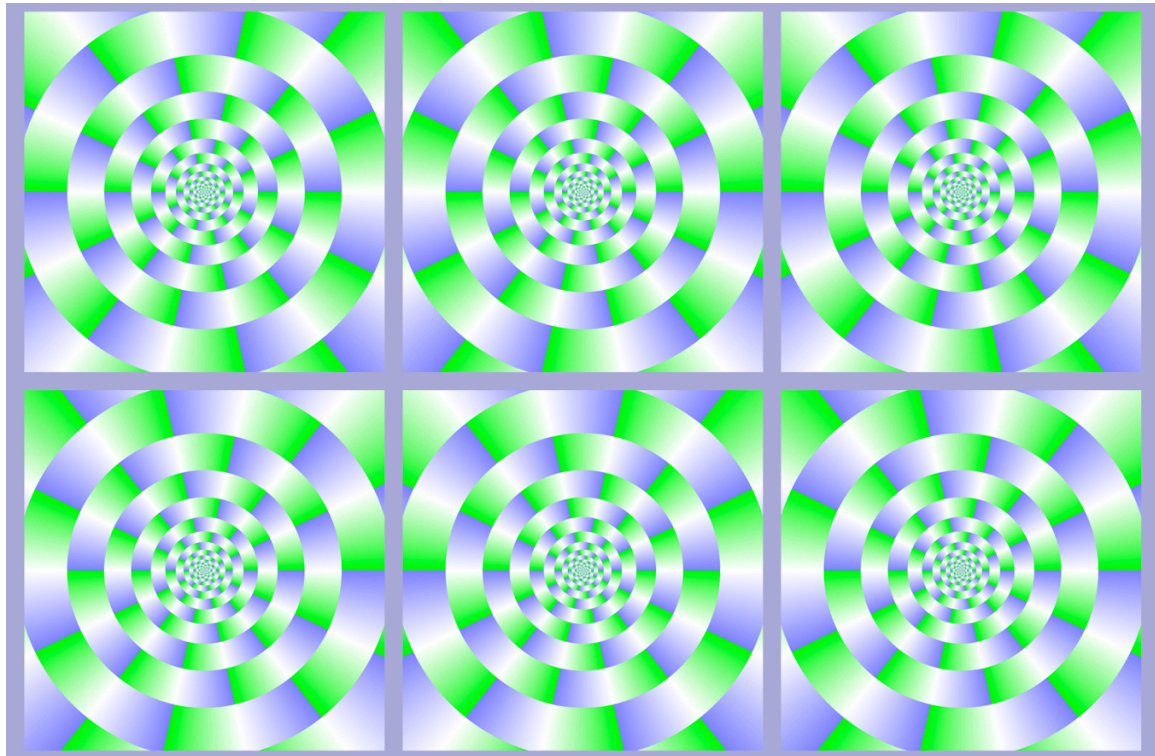


FACULTY OF SCIENCE
SCHOOL OF PSYCHOLOGY

PSYC2071

PERCEPTION AND COGNITION

SESSION 2 2013



1. INFORMATION ABOUT THE COURSE

Year of Delivery/Session Offered	2013 Session 2
Course Code/Name	PSYC2071 Perception and Cognition
Academic Unit	School of Psychology
Level of Course	Stage 2 Core course
Units of Credit	6UOC
Hours per week	4
Number of Weeks	12 weeks (1-12)
Commencement Date	Lectures start in Week 1 (first lecture is on Thursday 1/8/2013)
	Practical/tutorial classes start in Week 2
Prerequisites	PSYC1001 and PSYC1011

Lectures

	Day	Time	Location
Lecture 1	Thursday	4-5	CLB 7
Lecture 2	Friday	1-2	MAT A

Tutorials

		Perception Tutorials (Weeks 2-6)	Cognition Tutorials (Weeks 8-11)
Time	Location	Tutor	Tutor
Mon 10-12	MAT 302	Sarah Robuck	Nadia Menon
Mon 12-14	MAT 302	Emily White	Sonny Li
Mon 14-16	MAT 302	Emily White	Sonny Li
Mon 16-18	MAT 303	Nathan Mifsud	Joe Xu
Tue 12-14	MAT 302	Nadia Menon	Nadia Menon
Tue 14-16	MAT 302	Ashley Luckman	Ashley Luckman
Tue 16-18	MAT 302	Ashley Luckman	Dominic Tran
Wed 09-11	MAT 302	Sarah Robuck	Ashley Luckman
Wed 14-16	MAT 302	Dominic Tran	Adam Bove
Wed 16-18	MAT 302	Dominic Tran	Dominic Tran
Thu 09-11	MAT 302	Ashley Luckman	Ashley Luckman
Thu 11-13	MAT 303	Nadia Menon	Adam Bove
Thu 14-16	MAT 302	Nadia Menon	Nadia Menon
Fri 09-11	MAT 302	Ann Martin	Ann Martin
Fri 11-13	MAT 302	Ann Martin	Ann Martin

All rooms are wheelchair accessible.

2. STAFF INVOLVED IN THE COURSE

Administrative Role	Name	Contact Details
Course Coordinator and Perception Coordinator	A/Prof Branka Spehar Course Coordinator Cognition co-ordinator	Mathews 715 9385-1463; b.spehar@unsw.edu.au
Cognition Coordinator	Prof Marcus Taft Cognition co-ordinator	Mathews 714 9385-3026; m.taft@unsw.edu.au

Lecturers:

Name	Contact Details	Consultation Time
A/Prof Branka Spehar	Mathews 715 9385-1463; b.spehar@unsw.edu.au	<i>Email for questions or appointments, or consult immediately following lectures.</i>
Dr Joel Pearson	Mathews 510 9385-3969; jpearson@unsw.edu.au	
Prof Marcus Taft	Mathews 714 9385-3026; m.taft@unsw.edu.au	
Dr Thomas Beesley	Mathews 1006 9385-3032; t.beesley@unsw.edu.au	

Tutors:

Name	Email	Consultation Time
Adam Bove	a.bove@unsw.edu.au	<i>Email for questions or appointments, or consult immediately following laboratory classes.</i>
Sonny Li	sonny.li@unsw.edu.au	
Ashley Luckman	a.luckman@unsw.edu.au	
Nadia Menon	nadiamenon000@gmail.com	
Ann Martin	ann.martin@unsw.edu.au	
Nathan Mifsud	nathan.mifsud@unsw.edu.au	
Sarah Robuck	s.robuck@unsw.edu.au	
Dominic Minh Tran	m.d.tran@unsw.edu.au	
Emily White	emily.white@unsw.edu.au	
Joe Xu	joe.xu@unsw.edu.au	

Students will have registered for specific tutorial/practical classes when they enrolled. If circumstances necessitate an unavoidable change to your assigned class, submit your request in an attachment (with detailed justification and other possible tutorial times) to b.spehar@unsw.edu.au by Thursday 1 August, 5pm. You will then be informed if a transfer can be made.

Tutorial Attendance:

Students must attend their assigned practical class (i.e., tutorial) for the whole of the session. If you are unable to attend one of your tutorials for medical reasons, please ensure that you go to another tutorial during the week and let that tutor know which tutorial you normally go to. You will also need to show your regular tutor a medical certificate.

3. COURSE DETAILS

Course Description (Handbook Entry)	<p>Introduces the fundamental principles underlying human perception and cognition such as sensory coding, perceptual organisation, perception of spatial layout, perceptual learning, object recognition, attention, memory storage and retrieval, and decision making. The practical program will provide an introduction to the use of psychophysical methods, experimental approaches to the study of cognitive processes, and the application of findings in society.</p>
Course Aims	<p>This course introduces students to those areas of Psychology that are more closely concerned with “the mind”. These are Perception and Cognition. Perception is concerned with the processes and mechanisms which allow us to respond to our immediate environment, and to know its properties. These range from how far things are away from us or each other to the trajectory of a ball in a game of cricket to a facial expression. It is often a surprise to students to realise how unlike an image on the retina our rich perceptual experience is and how much interesting processing (using about half of the entire cortex of the brain) underlies what seems effortless and immediate. We shall consider a range of issues in this section of the course including the reasons for illusions, perceptual organisation and the way in which we learn to perceive. The cognition part of the course introduces students to theories and methods of investigating the fundamental cognitive processes that underlie attention, memory and thought. Cognitive psychologists study a range of phenomena that include such diverse topics as the factors that influence efficient memory storage and retrieval; the variables that contribute to “information overload”; and the methods people use to solve problems and make decisions. Understanding the perceptual and cognitive processes that underlie human behaviour has a number of important benefits. For example, consider an air traffic controller monitoring plane movements, a driver trying to avoid a pedestrian, a witness in a court case trying to recall past events, or a student studying for an exam. All of these tasks have significant consequences, yet people who perform them are constrained by a number of limitations. In this course we identify these constraints (that are rarely recognised by the people performing the task) and consider their implications.</p> <p>Broadly, all of these phenomena depend on understanding how people process information and are often described as the study of “human information processing”. This subject is primarily concerned with the behaviour of humans, but analogies are often drawn between human information processing and information processing by machines - the domain of “artificial intelligence”. Working out how a computer can be programmed to perform particular perceptual or cognitive tasks contributed to thinking about how people do these tasks. It turns out that the engineering problems that we solve when we see, walk, plan, and make it through the day are far more challenging than landing on the moon or sequencing the human genome. Computers are still very poor at recognising scenes and objects because the complexity of biological perceptual processing cannot yet be replicated. The complementary approaches of cognitive psychologists and computer scientists to understanding mental processes, and their interactions with other disciplines such as philosophy and neuroscience that are also concerned with understanding the mind, have led to the development of the discipline known as “cognitive science”.</p>
Student Learning Outcomes	<p>By the end of this course, you should have developed your research, inquiry and analytical thinking skills by:</p> <ul style="list-style-type: none"> • Becoming aware of theoretical issues and research relevant to perception and cognition, as covered in lectures and tutorial discussions • Gaining an understanding of the major methods of investigating perceptual and

	<p>cognitive processes, through lectures and practical class demonstrations</p> <ul style="list-style-type: none"> • Developing the ability to summarise and interpret experimental evidence about perceptual and cognitive processes through practical class exercises and discussion, as well as written assignments • Developing the ability to critically evaluate theories and evidence about perceptual and cognitive processes, through lectures, practical class discussions and written assignments
Teaching Strategies	<p>In addition to the traditional lecture format, the smaller group tutorials will include interactive exercises, hands on experience in measuring perceptual and cognitive functioning like absolute and relative sensitivity, perceptual illusions, visual search efficiency, memory, and decision making.</p> <p>The assignments for the course should not be seen only as a form of assessment. They are also meant to be provide an opportunity for developing important skills. The assignments are designed to tap into a range of skills, and the preparation required to carry them out should be seen as a learning experience. Feedback is provided not only to justify the mark, but also, and importantly, for the purposes of optimising an understanding of the issues underlying the assignment.</p>

4. GRADUATE ATTRIBUTES

School of Psychology Graduate Attributes¹	Level of Focus 0 = No focus 1 = Minimal 2 = Minor 3 = Major	Activities/Assessment
1. Core knowledge and understanding	3	Lectures and practical classes
2. Research methods in psychology	3	Practical classes
3. Critical thinking skills	3	Lectures and practical classes. Cognition take-home assignment
4. Values, research and professional ethics	1	Practical classes
5. Communication skills	2	Practical classes. Opportunity to answer and ask questions
6. Learning and application of psychology	2	Demonstrations and discussions within practical classes

¹ The *Graduate Attributes of the Australian Undergraduate Psychology Program* was produced as part of the Carrick Associate Fellowship project, "Sustainable and evidence-based learning and teaching approaches to the undergraduate psychology curriculum", and "Designing a diverse and future-oriented vision for undergraduate psychology in Australia", a Discipline-based Initiative funded by the Carrick Institute for Learning and Teaching in Higher Education (see Appendix II), and supported by the Australian Psychological Society, and the University of New South Wales (School of Psychology; Learning and Teaching @UNSW).

5. ADDITIONAL RESOURCES AND SUPPORT

Text Books	<p>Perception Wolfe, J.M., Kluender, K.R., & Levi, D.M. (2012). <i>Sensation & perception</i> (3rd edition). Sunderland, Mass.: Sinauer Assocs.</p> <p>Cognition Eysenck, M.W., & Keane, M.T. (2010). <i>Cognitive psychology: A student's handbook</i> (6th edition). Hove, UK: Psychology Press.</p> <p>A discounted package of the two books is available through the UNSW bookshop.</p>
Lecture Recordings	<p>Lecture recordings will be available on Moodle for the benefit of students who unavoidably miss a lecture, and for students who wish to revise lecture material. Students should note that listening to recordings should not be seen as a substitute for regular lecture attendance. Lecture notes will also be made available on the course website, but again, this should not be seen as being a substitute for the lecture itself because important details may be given in the lecture that are not found in these notes.</p> <p>Please note that tutorial information may not be available on Moodle, so it is important to take notes during your practical class. Consult your tutor as soon as possible for any clarification of tutorial material.</p>
Computer Laboratories or Study Spaces	<p>Computer facilities are available in the Mathews Building for students in the Bachelor of Psychology program.</p> <p>Other students should consult their program officer for information about facilities available to them.</p>

6. ADMINISTRATION MATTERS, INCLUDING PLAGIARISM

See the School of Psychology's Student Guide

(http://www.psy.unsw.edu.au/students/current/files/Student_Guide.pdf) for more information about the following issues:

- Expectations of students (including attendance at lectures and tutorials).
- Academic honesty. This includes misconduct such as cheating (on exams or by copying other students' assignments) and plagiarism (see also <http://www.lc.unsw.edu.au/plagiarism/index.html>).
- Procedures for submission of assignments and the School's policy concerning late submissions (e.g., for assignments, 2% of the marks will be deducted for each working day overdue).
- Examination procedures and advice concerning illness or misadventure.
- Withdrawal from the course.
- Student support services (including services for students who have a disability that requires some adjustment in their teaching or learning environment).

You are responsible for familiarising yourself with this information. This means you cannot say "I didn't know" if you violate any regulations referred to in this document.

7. ASSESSMENT TASKS AND FEEDBACK

Task and Knowledge & abilities assessed	Assessment Criteria and % of total mark	Date of		Feedback	
		Release	Submit	WHEN	HOW
<p><u>Perception take-home</u></p> <p>Based on the Weeks 2-3 tutorials, you will be asked to devise a method section for a specified research question.</p> <p>This exercise assesses your ability to apply understanding of basic research methods in perception.</p>	<p>The best answer will demonstrate that you can choose the most appropriate research methodology and formulate expected results that would confirm or disconfirm formulated hypotheses.</p> <p>This exercise is worth 15%</p>	Week 3 tutorials	Week 5 tutorial By midnight Monday	Week 7	Marks and general feedback via Moodle.
<p><u>Mid session exam</u></p> <p>25 multiple-choice questions based on lecture and tutorial materials in Weeks 1-4</p>	<p>Mid session exam is worth 15%</p>	Week 6 tutorials	Week 6 tutorials	Week 7	Marks and general feedback via Moodle.
<p><u>Cognition take-home</u></p> <p>You will be given a question that can be answered on the basis of material covered in tutorials (in about one page)</p> <p>This exercise assesses your understanding of methodological and theoretical issues in cognitive psychology.</p>	<p>The best answers will show a clear understanding of the issues involved by reporting only relevant ideas that directly address the question.</p> <p>This exercise is worth 20%</p>	Week 9 tutorials	By midnight Thursday October 10 (Week 10) Online via Moodle		Marks, general and individual feedback via Moodle.
<p><u>Final Exam</u></p> <p>48 multiple-choice questions based on lecture and tutorial material. 4 one-page answer questions, one from each lecturer.</p> <p>Final exam assesses your understanding of the topics covered in cognition and perception lectures and tutorials</p>	<p>The best open-ended answers will directly address the question being asked, and show a deep understanding of the issues being addressed. Irrelevant or wrong information will detract from one's answer.</p> <p>Final exam is worth 50%</p>	Exam period		After final marks are released Individual feedback only by appointment with Course co-ordinator.	

8. COURSE SCHEDULE

	Lecture 1 (Monday)	Lecture 2 (Friday)	Practical	Assessment
Week 1	<u>Aug 1</u> (BS) Course overview Introduction to Perception	<u>Aug 2</u> (BS) The first steps in vision [Wolfe: Ch.2]	<i>No tutorials this week</i>	
Week 2	<u>Aug 8</u> (BS) Cortical visual processing [Wolfe: Ch.3]	<u>Aug 9</u> (BS) Object perception [Wolfe Ch.4]	<u>PERCEPTION 1</u> Introduction Psychophysical Scaling	
Week 3	<u>Aug 15</u> (BS) Color perception 1 [Wolfe: Ch.5]	<u>Aug 16</u> (BS) Colour perception 2 [Wolfe: Ch.5]	<u>PERCEPTION 2</u> Measuring Sensitivity and Discrimination	Perception take-home assignment given out
Week 4	<u>Aug 22</u> (JP) Methods in perception research	<u>Aug 23</u> (JP) Space perception & Binocular vision [Wolfe: Ch.6]	<u>PERCEPTION 3</u> Lightness Perception /Perceptual Organisation	
Week 5	<u>Aug 30</u> (JP) Attention, mental imagery and memory [E&K: pp.110-117 & 205-211]	<u>Aug 31</u> (JP) Motion perception & sensory decision making [Wolfe: Ch.7; E&K: Ch.4 & Ch. 15]	<u>PERCEPTION 4</u> Colour perception/ Size & Distance Perception	Perception take-home assignment due – online (Moodle) submission due midnight Monday 26th August
Week 6	<u>Sep 5</u> (JP) Sixth sense	<u>Sep 6</u> (JP) Visual awareness and consciousness [Wolfe: Ch.8; E&K: Ch.16]	<u>PERCEPTION 5</u> Motion Perception/ Mid session exam	Mid session exam on materials in weeks 1-4
Week 7	<u>Sep 12</u> (TB) Intro to Cognition [E&K: Ch.1]	<u>Sep 13</u> (TB) Attention 1 [E&K: Ch.5 & pp. 143-149; Wolfe: Ch.8]	<i>No tutorials this week</i>	
Week 8	<u>Sep 19</u> (TB) Attention 2 [E&K: Ch.5 & pp. 143-149]	<u>Sep 20</u> (TB) Attention 3 [E&K: Ch.5 & pp. 143-149]	<u>COGNITION 1</u> Measuring the mind	
Week 9	<u>Sep 26</u> (TB) Attention 4 [E&K: Ch.5 & pp. 143-149]	<u>Sep 27</u> (MT) Semantic memory [E&K: pp. 263-267]	<u>COGNITION 2</u> Attention	Cognition take-home assignment given out

University break

University break				
Week 10	<u>Oct 10 (MT)</u> Propositions and scripts [E&K: pp. 400-410]	<u>Oct 11 (MT)</u> Imagery [E&K: pp.110-117]	<i>No tutorials this week</i>	Cognition assignment due – online (Moodle) submission due (midnight, Thursday, October 10
Week 11	<u>Oct 17 (MT)</u> Lexical memory [E&K: pp.336-349]	<u>Oct 18 (MT)</u> Working memory [E&K: pp. 211-223]	<u>COGNITION 3</u> Memory 1	
Week 12	<u>Oct 24 (MT)</u> Long-term episodic memory [E&K: pp.223-233]	<u>Oct 25 (MT)</u> Everyday memory [E&K: Ch.8]	<u>COGNITION 4</u> Memory 2	