

# PSYC 3012 - Cognition, Language & Thought

Unit of Study Code: PSYC3012

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TBA

Format of Unit: 2 x 1 hour lectures/week x 13 weeks  
1 x 2 hour tutorial for 10 weeks

Credit Point Value: 6 Credit Points

Prerequisites: Intermediate Psychology units including PSYC (2013 or 2113) and at least one other Intermediate Psychology unit from PSYC (2011 or 2111), PSYC (2012 or 2112), PSYC (2014 or 2114).

Assessment: **Classwork:**

- **Prac report:** 2000 word prac report (30% of the total mark)  
Due Date: **Friday May 8th 2009 (Week 9)**. The report must be submitted both in hardcopy and online.
- **Written prac exercise** based on prac material (10% of total mark).  
Due Date: **Friday 3rd April 2009 (Week 5)**
- **Performance in class debate in Week 4** (5% of total)
- **Practical class attendance and participation** (5% of the total mark)  
NB: It is a requirement to pass the course that you attend a minimum of 80% of pracs. **IT IS YOUR RESPONSIBILITY TO ATTEND THE PRAC YOU ARE ENROLLED IN TO BE MARKED AS PRESENT.** i.e. Tutors can not be expected to notify other tutors to confirm your attendance if you do not attend your enrolled prac.

**Final Examination:** (50% of the total mark)  
Multiple choice and short-answer questions based on lectures, set readings and material from practical classes

**NB You should read the general administrative guidelines for submission of written work, penalties for late work, assessment criteria, procedures for applying for extensions and special consideration on the School of Psychology web page ([www.psych.usyd.edu.au](http://www.psych.usyd.edu.au)).**

## **Unit of study general description:**

*This unit extends the theories and methods of investigating memory and attentional processes discussed in PSYC2013 to consider a number of domains of higher cognitive processing. One strand of the course will focus on language processing and consider how children learn language, the processes involved in speech perception and production, language comprehension and reading. The remainder of the course will deal with the cognitive processes involved in reasoning and decision-making. The practical program will expose students to a variety of the research methods used to investigate higher cognitive processes, develop their understanding of how these methods can be used to investigate hypotheses about mental processes and consider applications of cognitive research to real-world problems and issues.*

## **Graduate Attributes and Student Learning Outcomes for Cognition Language and Thought (PSYC3012)**

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, practical classes and assessment activities. They will be assessed in the two written assessments, participation in practical classes and in the final examination.

### **1: Knowledge and Understanding of cognitive psychology and psycholinguistics**

Display basic knowledge and understanding major concepts, theoretical perspectives, empirical findings, and historical trends in cognitive psychology and psycholinguistics

#### *Student learning outcomes:*

- (i) To stimulate an interest in the contribution of cognitive psychologists to understanding the cognitive processes involved in adult language abilities, childhood language development, skilled behaviour and reasoning.
- (ii) Ability to describe, explain and evaluate research studies examining the influence of basic word recognition skills on skilled reading.
- (iii) Ability to describe the course of language development from the womb to school-age literacy, to describe a number of developmental language disorders, and to understand the principles of skilled behaviour that differentiate experts from novices in a range of areas from motor skills to reading to reasoning.

### **2: Research Methods in cognitive psychology and psycholinguistics**

Understand, apply and evaluate basic research methods in cognitive psychology and psycholinguistics, including research design, data analysis and interpretation, and the appropriate use of technologies.

#### *Student learning outcomes:*

- (i) To develop a critical understanding of the major methods of research in these areas.
- (ii) To critically assess major theories and research findings in these areas.
- (iii) To interpret statistical analyses.
- (iii) Use basic web-search, word-processing, database, spreadsheet, and data analysis programs.
- (iv) Understand issues in the design and conduct of basic studies to address psychological questions: formulating research questions; undertaking literature searches; critically analyse theoretical arguments and empirical studies; form testable hypotheses; operationalise variables; choose an appropriate methodology; make valid and reliable measurements; analyse data and interpret results; and write research reports.

### **3: Critical Thinking Skills in cognitive psychology and psycholinguistics**

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

*Student learning outcomes:*

- (i) Demonstrate an attitude of critical thinking that includes persistence, open-mindedness, and intellectual engagement.
- (ii) Evaluate the quality of information, including differentiating empirical evidence from speculation.
- (iii) Evaluate issues and behaviour using different theoretical and methodological approaches.
- (iv) Use reasoning and evidence to recognise, develop, defend, and criticise arguments and persuasive appeals.

### **4: Values in cognitive psychology and psycholinguistics**

Value empirical evidence; act ethically and professionally; understand the complexity of sociocultural, linguistic and international diversity and of research with cognitively/linguistically impaired populations

*Student learning outcomes:*

- (i) Recognise and respect social, cultural, linguistic, spiritual and gender diversity.
- (ii) Use information in an ethical manner (e.g., acknowledge and respect the work and intellectual property rights of others through appropriate citations in oral and written communication)
- (iii) Be able to recognise and promote ethical practice in research, including research populations with cognitive impairment.
- (iv) Promote evidence-based approaches to understanding behaviour.

### **5: Communication Skills in cognitive psychology and psycholinguistics**

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) Write effectively in a variety of other formats (e.g., essays, experimental designs and hypotheses) and for a variety of purposes (e.g., informing, analysing, arguing).
- (iii) Demonstrate effective oral communication skills in various formats (e.g., debate, group discussion, class presentation) and for various purposes.
- (iv) Collaborate effectively, demonstrating ability to: work with groups to complete projects within reasonable timeframes; manage conflicts appropriately and ethically.

### **6: Learning and the Application of cognitive psychology and psycholinguistics**

Understand and apply psychological principles to personal and social issues.

*Student learning outcomes:*

- (i) To develop an awareness of the applications of the theories and research findings in **cognitive psychology and psycholinguistics**.
- (ii) Apply psychological concepts, theories, and research findings to solve problems in everyday life and in society.
- (iii) Understand major areas of applied **cognitive psychology and psycholinguistics**

### **Evidence of learning:**

Assessment will include a 2000 word prac report based on an experiment done in tutorials, a written prac exercise, performance verbal prac exercises, and active participation in tutorials. At the end of semester, a multiple-choice and short-answer examination will assess knowledge of the entire course focusing particularly on lecture material and assessable readings, but which will include some material exclusively covered in tutorials.

# SYLLABUS

## **Psycholinguistics**

Introduction: Linguistics vs psycholinguistics; Units and levels of language

Issues in speech perception; theories of lexical organization and retrieval.

Language comprehension and production: syntax and morphology; processing of sentences, text and discourse; theories of word production and speech processing; Aphasia: implications for understanding normal and impaired language processing

Language acquisition: nativist and non-nativist theories of language acquisition; methods of investigating infant behaviour; stages of language development; preverbal speech perception; acquisition of lexical/semantic and grammatical knowledge

Developmental language dysfunctions: autism and the role of “theory of mind”; specific reading disability.

Theories of visual word recognition and reading: implications for understanding success and failure in learning to read and for methods of reading instruction

## **Skilled behaviour, expertise and reasoning**

Cognitive determinants of skilled behaviour: attention, automaticity and control; declarative and procedural memory; stages of skill acquisition; implicit learning

Expertise: How do experts and novices differ? the role of representation and working memory in expertise; talent vs practice as the basis of expertise; theories of skill acquisition; how do you become an expert?

Reasoning: When and why do logic and human reasoning sometimes diverge? what conditions may encourage reasoning errors? theories of reasoning; integrating reasoning and skilled behaviour.

## TIMETABLE

WEEK (beginning)	LECTURES	TUTORIALS
1 (2/3)	1. Introduction to psycholinguistics (KC) 2. Language acquisition: The learnability problem (KC)	<b>NO TUTORIALS</b>
2 (9/3)	3. Acquiring phonology: "Universal phoneticians" turn into their parents (KC)  4. First words (KC)	<b>PRAC REPORT DATA COLLECTION, INSTRUCTIONS FOR DEBATE &amp; WRITTEN EXERCISE</b> Assessing reading and spelling
3 (16/3)	5 & 6 Acquiring syntax: "Do you are happy?" (KC)	Bilingualism
4 (23/3)	7. Acquiring word meanings: Solving the problem of crazy hypotheses (KC) 8. Developmental language dysfunctions (SA)	<b>DEBATE</b> Language acquisition
5 (30/3)	<b>Written PRAC EXERCISE DUE Friday 3rd April</b>  9. Specific reading disability (SA) 10. Theories of skilled reading (SA)	<b>DATA RETURN &amp; REPORT INSTRUCTIONS</b> Language functions and dysfunctions
6 (6/4)	11. & 12 Theories of skilled reading & reading development (SA)	Cognitive neuropsychology
(13/4)	<b>NON-TEACHING WEEK</b>	
7 (20/4)	13. & 14. Reading development & implications for teaching reading (SA)	Teaching reading
8 (27/4)	15 & 16 Adult language processing (KC)	Language and Implicit learning
9 (4/5)	<b>2000 word PRAC REPORT DUE Friday 8<sup>th</sup> May</b>  17. & 18. Basic concepts in skilled behaviour (BB)	<b>NO TUTORIALS</b>
10 (11/5)	19. & 20. How do experts and novices differ? (BB)	Skill & Expertise
11 (18/5)	21. Theories of skill acquisition and expertise (BB) 22. Basic concepts in reasoning (BB)	<b>NO TUTORIALS</b>
12 (25/5)	23. & 24. Reasoning phenomena (BB)	Reasoning
13 (1/6)	25. Theories of reasoning (BB) 26. Integrating reasoning and skill (BB)	Reasoning illusions

KC=Karen Croot; SA=Sally Andrews; BB=Bruce Burns

## REFERENCES FOR LECTURE MATERIAL

### **Textbook:**

Cognitive Processes: Eysenck, M.W. & Keane, M.T. (2005). *Cognitive Psychology: A student handbook (5<sup>th</sup> edition)*. New York: Psychological Press.  
(In particular Chapters 10-14 & 16)

### **Other references (lecturers will indicate which sections are relevant to their lectures)**

- Andrews, S. (1992) A skills approach: Optimising initial reading instruction. In A. Watson & A. Badenhop (Eds), Prevention of Reading Failure. Sydney: Ashton Scholastic. [SA]
- Bloom, P. (1994) Overview: Controversies in language acquisition. In P. Bloom (Ed.), Language Acquisition: Core Readings. MIT Press. [KC, Word learning & grammar acquisition. NB There is overlap between this reading and the Pinker (1990) reference below]
- Eysenck, M.W. & Keane, M.T. (2000) *Cognitive psychology: A student's handbook* (4<sup>th</sup> edition). Philadelphia: Psychology Press. [KC, pp. 305-311 for word recognition; pp. 335-347 for language comprehension]
- Frith, U., Morton, J. & Leslie, A. (1991) The cognitive basis of a biological disorder: Autism. Trends in Neuroscience, 10, 433-438. [SA]
- Frith, U. & Happe, F. (1998) Why specific developmental disorders are not specific: On-line and developmental effects in autism and dyslexia. Developmental Science, 1-2, 267-272. [SA]
- Gaskell, G. (2005) Language processing. In, Braisby, N & Gellatly, A (Eds) *Cognitive psychology (pp. 197-230)*. Oxford: OUP
- Hoff-Ginsberg, E. (1997) *Language development*. Pacific Grove, CA: Brooks/Cole. [KC, Ch. 2 for Acquiring the sounds of language]
- Peterson, C. & Siegal, M. (2000) Insights into theory of mind from deafness and autism. Mind and Language, 15, 123-145.
- Pinker, S (1990) Language acquisition. In N. Osherson & H. Lasnik (Eds), *Language: An invitation to cognitive science*, pp. 199-241. Cambridge, MA: MIT Press. (see also Bloom (1994), above)
- Pinker, S (1994) *The language instinct*. London: Penguin. Chapter 9.
- Plunkett, K (1995) Connectionist approaches to language acquisition. In P. Fletcher & B. MacWhinney (Eds.), *The Handbook of child language*, pp. 36-72 Oxford: Blackwell [KC, Word learning & grammar acquisition]
- Rayner, K., Foorman, B. R., Perfetti, C. A., Pesetsky, D., & Seidenberg, M. S. (2002). How should reading be taught? *Scientific American*, 286, 84-91. [SA]

If you want to check definitions of linguistic terms:

Crystal, DA (1985) *A dictionary of linguistics and phonetics*. Oxford: OUP

[References for BB to be announced]

**Additional references related to practical classwork will be provided in practical classes**

## School of Psychology Plagiarism Policy information for Students

### Plagiarism is not permitted

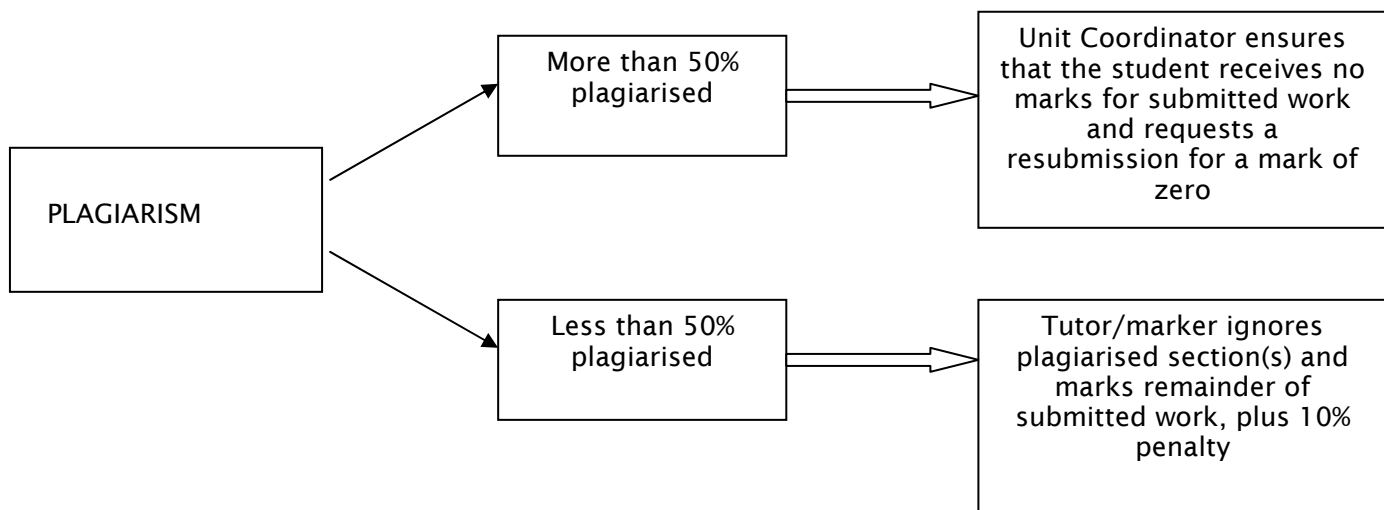
i) Are you sure you know what plagiarism is?

Please refer to the University policy on plagiarism:

<http://www.usyd.edu.au/senate/policies/Plagiarism.pdf>

ii) The School of Psychology will penalise **all** submitted work that is plagiarised;

iii) The School of Psychology is using software to detect **all** forms of plagiarism.



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Poppy Prezios is your Psychology Faculty Liaison Librarian. You can find her at Badham Library Ground Floor, Badham Building Science Rd, Camperdown Campus. You can phone her on 0434 606 913 or email at [p.prezios@library.usyd.edu.au](mailto:p.prezios@library.usyd.edu.au).

### Psychology books in high demand

Reserve (located on Level 2 of Fisher Library) is a 2 hour loan collection. Most of the required and recommended items will be here. Details of items required can be located in the catalogue.

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### Psychology Guide

includes links to Psychology databases, internet resources, information on tests and more.

<http://libguides.library.usyd.edu.au/psychology>

### Finding items on your reading lists

Your reading lists will contain different styles of citations, depending on the type of publication. The link below will take you to help on finding items on your reading list.

<http://elearning.library.usyd.edu.au/learn/readinglist/index.php>