



The University of Southern Queensland

## Course specification

<b>Description: Human Information Processing</b>						
Subject	Cat-nbr	Class	Term	Mode	Units	Campus
PSY	2040	44415	2, 2005	ONC	1.00	Toowoomba

<b>Academic group:</b>	FOSCI
<b>Academic org:</b>	FOS005
<b>Student contribution band:</b>	1
<b>ASCED code:</b>	090701

### STAFFING

Examiner: Gerry Tehan  
Moderator: Tony Machin

### REQUISITES

Pre-requisite: PSY1020 and STA2300

### RATIONALE

Perceptual, attentional and memory processes play a vital role in our daily life and a well functioning and well integrated perceptual and cognitive system is something that most of us take for granted. Most of us only notice these systems when they begin to fail. However, the true importance of these systems becomes very apparent when a massive breakdown is observed. For example, life is relatively difficult for people who suffer partial or total blindness or deafness. Children with attentional deficits experience daily problems. Elderly people with Alzheimer's Disease show the devastating effect of breakdown in the memory system. In short, deficits in our perceptual, attentional and memory systems have severe impacts upon a normal lifestyle. This course is designed to provide a good understanding of normal perceptual and cognitive processes.

### SYNOPSIS

The course starts with a revision of visual and auditory sensation that was covered in Foundation Psychology B. The course builds upon this material by examining visual and auditory perceptual processes and associated brain structures. Following perception, the course deals with attention looking at both the different types of attention and the different theories of how attention works. Memory over short retention intervals is then examined with an emphasis upon working memory. Finally the course looks at the factors involved in producing long-term memories.

### OBJECTIVES

On successful completion of this course students will be able to demonstrate:

1. a rudimentary knowledge of structures in the areas of sensation, perception, learning and memory; and

- skills in conducting and reporting experimental research in these areas;

## TOPICS

	Description	Weighting (%)
1.	Sensation: The Visual System Structure of the Eye and Retina and the Visual Pathways	8.70
2.	Perception: Visual Functions - Edges, Changes and Acuity	8.70
3.	Visual Pattern Perception - Shapes, Spatial Frequency & Gestalt Laws	8.70
4.	Distance and Size Perception - 3D from 2D and Illusions.	8.70
5.	Motion - Real and Illusory Movement	8.70
6.	Perception: Sound - Auditory Perception - Music and Speech	8.70
7.	Learning: Classical Conditioning	8.30
8.	Learning: Operant Conditioning	6.30
9.	Short-term Retention: Short-term memory	8.30
10.	Short-term Retention: Working memory	8.30
11.	Long-term Memory: Encoding and imagery	8.30
12.	Long-term Memory: Retrieval, organisation and practice	8.30

## 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).

CD-ROM highly recommended but not compulsory

Ashcraft, MH 2002, *PSY2040 Human Information Processing*, (Part 2: Attention and Memory, Pearson Education Australia, Sydney. (Sourced from Ashcraft, M.H., 2002, *Cognition 3E*, Prentice Hall, Upper Saddle River).)

Matlin, MW & Foley, HJ 2002, *PSY2040 Human Information Processing*, (Part 1: Sensation and Perception, Pearson Education Australia, Sydney. (Sourced from Matlin, M.W. & Foley, H.J., 1997, *Sensation and Perception*, 4th edn, Allyn & Bacon, Boston.)

Ryan, C 1997, *Exploring Perception*, Brooks/Cole, Pacific Grove, CA.

(Note selected exercises in study book with CDROM.)

Study Package 2004, *PSY2040 Human Information Processing*, Distance Education Centre, USQ, Toowoomba.

## 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.

- Ackerman, Dianne 1995, *Mystery of the Senses Series - Hearing*, Green Umbrella Ltd, Washington.
- Ackerman, Dianne 1995, *Mystery of the Senses Series - Vision*, Green Umbrella Ltd, Washington.
- Carlson, NR 1999, *Foundations of Physiological Psychology*, 4th edn, Allyn & Bacon, Boston.
- Carlson, NR 2001, *Physiology of Behavior*, 7th edn, Allyn & Bacon, Boston.
- Coren, S, Ward, LM & Enns, JT 1999, *Sensation and Perception*, 5th edn, Harcourt Brace College Publishers, New York.  
(with CD-Rom)
- Coren, S, Ward, LM & Enns, JT *Explorations in Sensation and Perception*,  
(CD-ROMs ISBN: 0-15-506884-9)
- Gazzaniga, MS, Irvy, RB & Mangun, GR 1998, *Cognitive Neuroscience: The biology of the mind*, Norton, New York.
- Goldstein, EB 1999, *Sensation and Perception*, 5th edn, Brooks/Cole, Pacific Grove, CA.
- Kalat, JW 2000, *Biological Psychology*, 7th edn, Wadsworth Thomson Learning, Belmont, CA.
- Kandel, ER, Schwartz, JH & Jessell, TM 1995, *Essentials of Neural Science and Behaviour*, Appleton & Lange, Norwalk.
- Kimble, DP 1992, *Biological Psychology*, 2nd edn, Harcourt Brace Jovanovich, Fort Worth.
- Kohn, A & Kohn, W 1998, *The Integrator for Biological Psychology*, Brooks/Cole, Pacific Grove, CA.  
(linked to Kalat's text ISBN: 0-534-34921)
- Lefton, LA 2000, *Psychology*, 7th edn, Allyn & Bacon, Boston.
- Martindale, C 1991, *Cognitive Psychology: A Neural Network Approach*, Brooks/Cole, Pacific Grove, CA.
- Matlin, MW & Foley, HJ 1992, *Sensation and Perception*, 3rd edn, Allyn & Bacon, Boston.
- Pinel, JPJ 2000, *Biopsychology*, 4th edn, Allyn & Bacon, Boston, MA.
- Purves, D et al (ed) 1997, *Neuroscience*, Sinauer, Massachusetts.
- Rathus, SA 2002, *Psychology in the New Millenium*, 8th edn, Harcourt Brace, Fort Worth.
- Reed, SK 1996, *Cognition: Theory and Applications*, 4th edn, Brooks/Cole, Pacific Grove, CA.
- Ruben, Neil 1968, *The Eyes and Seeing*, Encyclopaedia Britannica Educational Corporation, Chicago.
- Sabbagh, Karl 1985, *Eyes and Ears*, Goldcrest Multimedia Television, Princeton.
- Schiffman, HR 1996, *Sensation and Perception: An Intergrated Approach*, 4th edn, John Wiley & Sons, New York.
- Sekuler, R & Blake, R 1994, *Perception*, 3rd edn, McGraw-Hill, New York.
- Smock, TK 1999, *Physiological Psychology: A Neuroscience Approach*, Prentice Hall, New Jersey.

Springer, SP & Deutsch, G 1998, *Left Brain, Right Brain*, 5th edn, Freeman, New York.

Suzuki, David 1997, *The Brain: Our Universe Within*, Discovery Channel, Bethesda.  
(Video: two tapes - four programs)

Teyler, TJ 1996, *The Graphic Brain: Neurophysiology*, Didactic Systems, Pacific Grove, CA.  
(ISBN: 0-534-34036-9)

Zimbardo, Philip G 1989, *Discovering Psychology: Program 7 - Sensation and Perception*, WGBH Boston in association with the American Psych, USQ Library, Toowoomba.  
(AV152.1 Dis)

## STUDENT WORKLOAD REQUIREMENTS

ACTIVITY	HOURS
Assessment	22.00
Examinations	2.00
Lectures	36.00
Private Study	110.00

## ASSESSMENT DETAILS

Description	Marks out of	Wtg(%)	Due date
ASSIGNMENT 1	45.00	15.00	29 Aug 2005
ASSIGNMENT 2	35.00	30.00	03 Oct 2005
2 HOUR CLOSED EXAMINATION	70.00	55.00	END S2 (see note 1)

### NOTES

1. Examination dates will be available during the Semester. Please refer to the examination timetable when published.

## IMPORTANT ASSESSMENT INFORMATION

- 1 Attendance requirements:  
It is the students' responsibility to attend and participate appropriately in all activities (such as lectures, tutorials, laboratories and practical work) scheduled for them, and to study all material provided to them or required to be accessed by them to maximise their chance of meeting the objectives of the course and to be informed of course-related activities and administration.
- 2 Requirements for students to complete each assessment item satisfactorily:  
To complete each of the assignments satisfactorily, students must obtain at least 50% of the marks available for each assignment.
- 3 Penalties for late submission of required work:  
If students submit assignments after the due date without prior approval then a penalty of 0% 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% in the examination and at least 50% of the available weighted marks for the summative assessment items.

- 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 (or grades) 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:  
No supplementary examinations will be given. Deferred examinations 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.

## **ASSESSMENT 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 five days if required by the Examiner.
- 11 Access to email, discussion groups and the internet is a departmental requirement. I expect you to open your university provided email account and check it regularly for personal communication. Information sent this way will be regarded as being receivable. [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 your candidature].