



unit guide

COGNITIVE PSYCHOLOGY

TPS-2-202

URL: <http://www.sbu.ac.uk/psycho/teaching/cogpsy-main.shtml>

**Faculty of Arts and Human Sciences
Department of Psychology**

2007/08

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1. UNIT DETAILS

Unit Title:	Cognitive Psychology
Unit Level:	2
Unit Reference Number:	TPS-2-202
Credit Value:	1
Student Study Hours:	150
Contact Hours:	36
Private Study Hours:	114
Pre-requisite Learning (If applicable):	Completion of Level 1
Co-requisite Units (If applicable):	None
Course(s):	BSc (Hons) Psychology BSc (Hons) Psychology (Clinical) BSC (Hons) Psychology (Child development) BA/BSc COMBINED HONOURS DEGREE - Psychology Field
Year and Semester	Year 2, Semester 2
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Subject Area:	Psychology
Summary of Assessment Method:	One 2-hour unseen examination (60%) One coursework assignment (40%)

2.0 SHORT DESCRIPTION

This unit provides students with the opportunity to explore a selection of the major concepts, theories and methods encountered in important areas of cognitive psychology. The unit concentrates on the topics of attention, perception, memory, reasoning and problem solving, knowledge representation and language production and comprehension. The major themes that run throughout the unit are: the nature of mental processes and structures; the modularity of cognitive processes and the interaction of studies of normal and impaired cognition.

3.0 AIMS OF THE UNIT

The aim of this unit is to give you a general introduction to concepts, theories, and methods encountered in the main areas of cognitive psychology, namely: attention; perception; memory; thought; language; and problem solving. The main standpoint from which these topics will be approached is that of experimental psychology, but key studies from the neighbouring disciplines of cognitive neuropsychology, cognitive neuroscience and computational cognitive science will be described where they illuminate the issues.

4.0 LEARNING OUTCOMES

On completion of the unit you should be able to:

- define and characterize the domain of cognitive psychology in terms of its major components (perception, memory, etc.)
- show an understanding of the relative strengths and weaknesses of the different empirical methods employed in cognitive psychology;
- describe and evaluate the major theoretical concepts and assumptions underpinning contemporary cognitive psychology;
- describe and evaluate the major theories in the areas of cognition studied;
- demonstrate an awareness of the relationships between cognitive psychology and neighbouring disciplines such as cognitive neuroscience and cognitive neuropsychology
- retrieve and organize information from electronic sources effectively

You will also have the opportunity to develop the following transferable skills:

- making critical judgements and evaluations;
- comprehending and using data effectively;
- identifying and evaluating general patterns in psychological functioning;
- problem solving and reasoning scientifically.
- handling primary source material critically;
- communicating effectively verbally;
- communicating effectively using written language.

5.0 ASSESSMENT OF THE UNIT

- Coursework essay (40%).
- Two-hour Unseen Examination (60%)

NOTES ABOUT SUBMITTING COURSEWORK

1. When handing in coursework, you must:

- complete the coursework submission form and attach it to the front of your coursework;
- take the coursework to the School Office. Your submission form will be date stamped and a receipt issued. Please keep all receipts.

You must not hand coursework to your unit co-ordinator or other lecturer.

2. Unless you have obtained a formal extension from your year tutor, coursework submitted:

- up to two weeks after the deadline date will receive a maximum mark of the pass mark (40%);
- more than two weeks after the deadline will not be marked.

3. Extensions are only granted for valid reasons (see Course/Field guide). Concrete evidence (e.g. medical certificate) will normally be required by the Year Tutor. If you want an extension of the deadline date, you must:

- get a copy of the form for late submission from the School Office;
- fill in Part A of the form, giving reasons why you cannot meet the existing deadline date;
- supply the Year tutor with relevant documentary evidence;
- ask the Year Tutor to fill in Part B – the decision whether to agree the request rests with the Year Tutor;
- attach the form to the front of your coursework when you submit it (keep a copy for your records).
- each extension form is only valid for one piece of coursework.

The maximum extension is two weeks

6.0 FEEDBACK

Coursework will normally be marked and returned twenty working days after the submission of the work. Feedback will normally be provided on the script and on the feedback sheet. If you want feedback on the script then please provide two copies of the coursework, one of which will be returned to you with the feedback. If you do not provide two copies you will not be able retain the single script containing the feedback.

7.0 INTRODUCTION TO STUDYING THE UNIT

7.1 Overview of the Main Content

<u>Week</u>	<u>Lecture</u>	<u>Seminar</u>	
		Topic	Groups
One	Introduction to Cognitive Psych (CS)	No seminar	
Two	Perception I (SN)		
Three	Perception II (SN)	Seminar 1: Perception	A, B and C
Four	Attention (CS)	Seminar 1: Perception	D,E
Five	Human Memory 1 (RW)	Seminar 2: Attention	A, B and C
Six	Human Memory 2 (RW)	Seminar 2: Attention	D,E
Seven	Human Memory 3 (RW)	Seminar 3: Memory	A, B and C
Eight	Reasoning and Problem Solving (EN)	Seminar 3: Memory	D,E
Nine	Judgement and Decision-Making (EN)	Seminar 4: Reasoning and Problem Solving	A, B and C
Ten	Concepts (CS)	Seminar 4: Reasoning and Problem Solving	D,E
Eleven	Language (CS)	Seminar 5: Concepts	A, B and C
Twelve	Review and Revision Lecture (All tutors)	Seminar 5: Concepts	D,E

N.B. The Easter break (3 weeks) follows week 7.

7.2 Overview of Types of Classes

This unit builds upon the unit Introduction to Biological and Cognitive Psychology that students take in their first year.

The unit will be delivered via 12 two-hour lecture sessions and 5 two hour seminar/ discussion/practical sessions, directed study, self-managed learning and tutorials.

The **lecture** sessions will be in two 40-45 minute blocks, though individual lecturers may adopt a different format. The lectures aim to provide you with an overview of the main lines of thought on a particular topic, including a discussion of major models, key empirical data and important conceptual issues.

The lectures begin with a general introduction to the Field that identifies key concepts and methods that are used in contemporary cognitive psychology.

The activities undertaken in **seminars** will vary in nature. Some activities will provide explicit back-up to topics covered in the lectures via discussion of pre-set questions, some will deepen and/or broaden knowledge of a particular topic via the discussion of research papers, or problem solving tasks and some will take the form of practical exercises.

Tutorials can be arranged by appointment with any of the teaching team. Tutorials can be arranged by individual students or by groups of 2-4 students. They can be used most effectively to clarify material discussed in lectures and seminars or to discuss topics that you are working-up for the examination.

Students who have urgent questions can e-mail an appropriate member of the teaching team for immediate assistance. (Tutor e-mails are provided on page 1.)

There is a Blackboard site for this Unit which will be visible on your home page if your student record is in order. There will be material of interest posted there, including lecture powerpoint files, and links to other useful resources.

7.3 Importance of Student Self-Managed Learning Time

In addition to the activities described in 5.2 you also have a considerable amount of time in which to undertake **self-managed learning**. This is a vital component of study on a degree programme. Some of this time should be used to undertake preparatory reading for the lectures and to prepare for seminar sessions. However, you should also use this time to read around the subject and begin to develop the more in-depth knowledge that you will need to have in order to perform well in the coursework and the unseen Cognitive Psychology examination. It is impossible, and you are not expected, to develop in-depth knowledge on all areas of the curriculum. However, good performance in seen essays requires knowledge that goes beyond that provided in classes and in essential reading. To study a topic in depth you might start from the supplementary reading suggested for each topic and also follow up the references to key journal papers provided in the essential reading.

7.4 Employability.

This unit is one of the core units required by the British Psychological Society for accreditation of the B.Sc. Honours degrees. A BPS accredited degree is an important requirement for a future career in Psychology and you are strongly advised to engage with the topics in this unit, because, although sometimes difficult, they are interesting in their own right and also because it would help your future employment opportunities if any transcript of results showed that you had passed all core units.

While Cognitive Psychology is mainly concerned with theoretical and empirical issues many topics are of practical and vocational interest. These include topics such as eyewitness memory, judgement and decision making, and a variety of neuropsychological impairments.

8.0 THE PROGRAMME OF TEACHING, LEARNING AND ASSESSMENT

Week 1

Lecture Topic – Overview of Cognitive Psychology

Aim.

The aim of the lecture is to outline a framework for understanding the aims, areas, methods and explanations of Cognitive Psychology

Synopsis.

The lecture is arranged around four questions. First, what kinds of questions do Cognitive Psychologists ask? Second, what are the major areas studied in Cognitive Psychology? Third, what are the methods used to study these areas and finally, what are the kinds of explanations that result?

Learning Outcomes:

At the end of the lecture students should be able to:

- Identify the major aims of cognitive psychology
- Describe the major areas of study and give examples of each
- Describe the methods used and provide an example of each
- Describe the kinds of explanation that exist and how they relate to each other.

Core Reading

Eysenck, M.W. and Keane, M.T. (2005) Cognitive Psychology: A Student's Handbook. Hove: Psychology Press. Chapter 1 "Approaches to Cognitive Psychology".

Sternberg, R.J. (2007) Cognitive Psychology. London: Wadsworth. Fourth Edition. Chapter 1. Introduction to Cognitive Psychology.

Braisby, N. & Gellatly, A. (2005) Cognitive Psychology. Oxford: OUP. Chapter 1 Foundations of Cognitive Psychology. Chapter 17. Theoretical issues in cognitive psychology.

Weeks 2 and 3

Lecture Topic - Perception

Aim.

The aim of these lectures is cover perception of form and faces, and to introduce evidence of dual visual pathways.

Synopsis.

Lecture 1:- will review the basic aspects of top down (Constructivist) and bottom up or direct (Gibson) theories of perception. Biederman and Marr's theories of perception for recognition will also be covered.

Lecture 2:- Perception of faces and evidence of dual streams of processing of visual information. The lecture will introduce models of face processing (Bruce and Young 1986) and review the accompanying neuropsychological and experimental evidence.

Learning Outcomes:

At the end of the lecture students should be able to:

- Understand the difference between top down and bottom up theories of perception.
- Describe direct perception as proposed by Gibson, and its implications for the perception of motion.
- Describe the main theories of perception for recognition (Beiderman & Marr).
- Describe Bruce and Young's model of face perception, and its supporting experimental and neuropsychological evidence.
- Understand the key features of a dual route of processing within the visual system from retina through to visual cortex.

Core Reading

Eysenck, M.W. and Keane, M.T. (2005) Cognitive Psychology: A Student's Handbook. Hove: Psychology Press. Chapters 2, 3 & 4.

Sternberg, R.J. (2007) Cognitive Psychology. London: Wadsworth. Fourth Edition. Chapters 3 & 4.

Braisby, N. & Gellatly, A. (2005) Cognitive Psychology. Oxford: OUP. Chapter 4.

Material provided in the handout.

Week Four

Lecture Topic: Divided Attention

Aims

The aim of the lecture is to explore, critically, various aspects of divided attention, including the notion of automaticity and the idea of automatic and controlled processes

Synopsis.

The lecture starts with a description of a model of attention which assumes a limited capacity central processor and then examines the degree to which this model of resource allocation is able to explain various experimental findings. It is rejected in favour of a multiple resource model. The concept of automaticity and its implications for dual task performance are examined. A distinction is made between automatic and controlled processes and this related to the notion of a supervisory control system.

Learning Outcomes

Students will be able to:

- Explain what is meant by divided attention
- Describe the dual task paradigm
- Review experimental findings which bear on the kind of model that can explain the limitations on divided attention
- State what is meant by automaticity and explain how processes may become automatic.
- Explain the distinction between automatic and controlled processes.
- Describe the Supervisory Attentional System

Core Reading

Eysenck, M. W. & Keene M. T. (2000) *Cognitive psychology: A student's handbook* (4th ed.). Hove, UK: Psychology Press. Chapter 5 Attention & Performance Limitations.

Sternberg, R.J. (2007) *Cognitive Psychology*. London: Wadsworth. Fourth Edition. Chapter 3. Attention and Consciousness.

Braisby, N & Gellatly, A (2005), *Cognitive Psychology*. Oxford: Oxford University Press. Chapter 2 Attention.

Seminar Topic – Attention: The Dual Task Paradigm.

Aim:

To demonstrate the problems of trying to do two tasks at the same time

Synopsis of activity.

In this seminar students will design a number of hypothetical experiments to answer applied research questions about divided attention and the dual task paradigm.

Learning Outcomes

Students will be able to:

- Identify some of the factors that make doing two tasks simultaneously difficult

- Identify the kind of theory needed to accommodate the data and so judge between competing theories

Seminar Reading

None

Week 5

Lecture Topic – Memory Structures

Aim

The aim of this lecture is to examine evidence for multiple memory systems

Synopsis

In this lecture we will look at memory structure including the multi-store model of memory. We will also examine working memory and aspects of long term memory. In considering long term memory there will be discussion of implicit/explicit memory and episodic/semantic memory.

Learning outcomes – will be given out in the lecture

Core Reading

Sternberg, R.J. (2007) Cognitive Psychology. London: Wadsworth. Fourth Edition. Chapter 5 Memory: Models and research methods

Eysenck, M.W. and Keane, M.T. (2005) Cognitive Psychology: A Student's Handbook. Hove: Psychology Press. Chapter 6 Learning and memory Chapter 7 Long-term memory stores

Week 6

Lecture Topic – Memory Processes and Improving Memory

Synopsis

Following on from lecture five on the structure of memory, we will in this lecture look at processes involved within memory structure. We will consider encoding and levels of processing, aiding our memory, for example via mnemonics, retrieval, and forgetting.

Learning outcomes – will be given out in the lecture

Core Reading

Sternberg, R.J. (2007) Cognitive Psychology. London: Wadsworth. Fourth Edition. Chapter 6 Memory processes.

Eysenck, M.W. and Keane, M.T. (2005) Cognitive Psychology: A Student's Handbook. Hove: Psychology Press. Chapter 6 Learning and memory Chapter 7 Long-term memory stores

Week 7

Lecture Topic – Everyday Memory

Synopsis

Thus far we have considered memory as a 'storehouse' for information. In our final lecture on memory we will discuss everyday memory i.e. research that looks at how we use memory in everyday situations. We will look at episodic memory, autobiographical memory, the self-reference effect, flashbulb memory, and prospective memory.

Learning outcomes – will be given out in the lecture

Core Reading

Eysenck, M.W. and Keane, M.T. (2005) Cognitive Psychology: A Student's Handbook. Hove: Psychology Press. Chapter 8 "Everyday Memory".

Sternberg, R.J. (2007) Cognitive Psychology. London: Wadsworth. Fourth Edition. Chapter 5 Memory: Models and research methods. Chapter 6 Memory processes.

Memory Seminar

Aim

The aim of the seminar is to consolidate knowledge gained in the lectures and to develop students understanding of how the effects of brain damage can inform us about aspects of memory.

Synopsis

In this seminar we will listen to a fifteen minute podcast about the effect of brain damage on Clive Wearing's memory. We will hear from Clive and his wife about the memory abilities he has retained and those that he has lost. The content of the podcast will form the basis of a class discussion about different aspects of memory.

Learning Outcomes - will be given out in class

Reading - will be given out in class