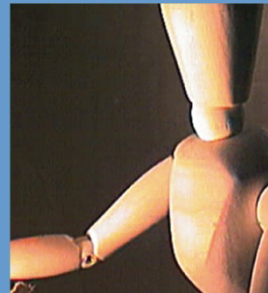
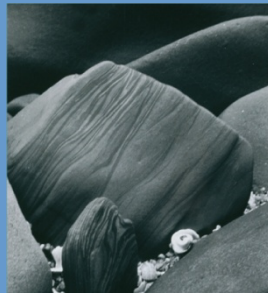
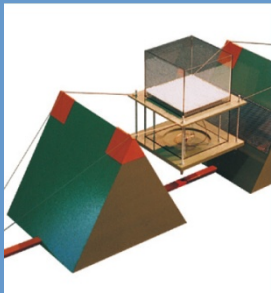


VCE Psychology Units 3 & 4 2011-2014

What's new in this course?



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Workshop Agenda

1. Organisation of the new Study Design
2. Overview of changes – Introduction
3. Overview of changes – Key skills
4. Overview of changes – Course content
5. Unit 3 changes
6. Unit 4 changes
7. School Assessed Coursework changes
8. Examinations changes and sample questions
9. Familiarisation activities

Overview of Study Design

5 main sections:

- Introduction (pp.7-10)
- Assessment and reporting (pp.11-13)
 - Use in conjunction with separate Assessment Handbook
- Key skills – generic to Units 1-4 (p.13)
- Course outline – Units 1-4 (pp.14-34)
- Advice for teachers (pp.35-68)

Overview of changes – Introduction

1. Student safety and wellbeing:

- expanded (p. 9)
- dealing with sensitive issues (p.37)

2. Ethical conduct of experimental investigations:

- clearly specified
- reference to key documents from NHMRC, Commonwealth Gov't (Privacy Act), APS

What's different?

Student safety and wellbeing

Now...

Safety

“It is the responsibility of the school to ensure that duty of care is exercised in relation to the health and safety of all students undertaking the study.”

(p. 9)

From 2011...

Safety and wellbeing now refers to:

- dealing with sensitive topics objectively
 - protection from personal disclosures
 - dealing with mental health matters
 - appropriate access to psychological tests
- (pp. 9, 37)

Ethical conduct of experimental investigations

- Teachers' responsibility to ensure students follow ethical principles when undertaking investigations (p. 9)

What's different?

Key skills

Now...

Key skills linked specifically to key knowledge for each *Area of study*

(pp. 13,15, 17, 19)

From 2011...

Key skills applied to all VCE Sciences, across Units 1 to 4 are specified at the start of the study design

(p.13)

The key skills are described under three broad headings:

- Investigate and inquire scientifically
- Apply psychological understandings
- Communicate psychological information and understandings



Overview of changes- course content

- **The course is now more articulated**
E.g., - Baddeley & Hitch – working memory: central executive, phonological loop, visuo-spatial sketchpad, episodic buffer
- **Research methods and ethics are specified for each unit** (pp. 22-3 & 28)
- **Changed structure - two *Areas of study* for each unit:**
 - **Unit 3: The conscious self**
Area of study 1: Mind, brain and body
Area of study 2: Memory
 - **Unit 4: Brain, behaviour and experience**
Area of study 1: Learning
Area of study 2: Mental health

What's different?

Research methods and ethics

Now...

Specific research methods listed as separate dot points often with a particular context within key knowledge in each AoS

e.g. “research methods in visual perception, including use of participant selection, random and stratified sampling,” (p. 22)

From 2011...

- Research methods and ethics specified in the Introduction to each Unit
- Teachers decide where and how to contextualise research methods and ethics across the Unit (pp 22-3 & 28)
- Research methods and ethical principles listed in Unit 3 also assessed in Unit 4

Research methods knowledge and skills specified under general headings:

- **experimental research**
- **sampling procedures in selection and allocation of participants**
- **techniques of qualitative and quantitative data collection**
- **statistics**
- **ethical principles and professional conduct**

Course structure

What's different?

Now...	From 2011...
<p>Unit 3</p> <ul style="list-style-type: none">• AoS 1: Brain and nervous system• AoS 2: Visual perception• AoS 3: States of consciousness	<p>Unit 3: The conscious self</p> <ul style="list-style-type: none">• AoS 1: Mind, brain and body• AoS 2: Memory
<p>Unit 4</p> <ul style="list-style-type: none">• AoS 1: Memory• AoS 2: Learning• AoS 3: Research investigation	<p>Unit 4: Brain, behaviour and experience</p> <ul style="list-style-type: none">• AoS 1: Learning• AoS 2: Mental health

Unit 3: The conscious self

Unit 3 changes

What's new in research methods/ethics? (1/2)

Experimental research:

- Construction of research hypotheses (from Unit 4)
- Operational DV and IV (from Unit 4)
- Confounding variables: individual differences, order effects
- Reporting conventions

Sampling procedures:

- Random-stratified sampling

Techniques of qualitative and quantitative data collection:

- case studies, observational studies, self-reports, questionnaires, interviews (from Units 1&2)

Unit 3 changes

What's new in research methods/ethics? (2/2)

Statistics:

- Measures of central tendency (mean, median, mode)
(from Units 1&2)
- Reliability including internal consistency
- Validity including construct and external

Ethical principles and professional conduct:

- Use of animals in research
- Role of ethics committees

Unit 3: AoS 1: Mind, brain and body

What's new?

Includes content from both AoS 1 & 3 of current S/D: Brain and nervous system & States of consciousness

Unit 3: AoS 1- Mind, brain and body

Specifically what's new?....(1/3)

- Consciousness as a psychological construct - Descartes and James theories
- States of consciousness – includes daydreaming, meditative states and alcohol-induced altered states of consciousness
- Purpose of sleep –restoration and survival theories
- Additional methods used to study level of alertness/sleep – sleep laboratories, video-monitoring, self reports
- Effects of sleep deprivation – now articulated:
 - Sleep recovery patterns, REM rebound, microsleeps
 - Comparison of sleep-wake cycles of children, adolescents & adults including delayed onset and need for sleep

Unit 3: AoS 1- Mind, brain and body

Specifically what's new?....2/3

- Interaction between cognitive processes of the brain and its structure:
 - Role of primary cortex and association areas of cerebral cortex
 - Role of the reticular activating system in selective attention and wakefulness
 - Role of the thalamus in directing attention and switching sensory input on and off

Unit 3: AoS 1- Mind, brain and body

Specifically what's new?....3/3

- Contribution of brain studies to the understanding of consciousness including:
 - Broca's and Wernicke's aphasia
 - Spatial neglect
 - Split-brain studies of Sperry & Gazzaniga
 - Perceptual anomalies – motion after-effect, change blindness, synaesthesia
- brain research methods:
 - transcranial magnetic stimulation (TMS)
 - single photon emission computed tomography (SPECT)

Unit 3: AoS 2 – Memory

What's new?

Moved from Unit 4 into Unit 3, some content changes

Unit 3: AoS 2- Memory

Specifically what's new?....1/2

- Mechanism of memory formation:
 - role of the neuron in forming memories – Kandel's work
 - roles of the hippocampus and temporal lobe
 - amnesia from neurodegenerative diseases – dementia, Alzheimer's disease
- Models of memory:
 - Craik & Lockhart – levels of processing
- Tip-of-the-tongue phenomenon

Unit 3: AoS 2- Memory

Specifically what's new?....2/2

- manipulation and improvement of memory:
 - additional mnemonic devices: acronyms, peg-word method
 - effect of misleading questions on eye-witness testimonies, reconstructive nature of memory informed – Elizabeth Loftus

Unit 3

What's OUT?

- Uses and limitations of polygraphs
- Relationship between stress and disease
- ALL of AoS 2 – Perception (now in Unit 1)
- Studying sleep using an EMG
- Sleep phenomena: insomnia, hypersomnia, sleep apnoea, nightmares/terrors, sleep walking/talking
- Encoding, storage and retrieval in terms of the information processing model of memory

Unit 4: Brain, behaviour and experience

Unit 4 changes

What's **new** in research methods/ethics? (1/2)

Research methods stipulated in Unit 3 are also included in both outcomes in Unit 4

Experimental research:

- Extraneous and confounding variables – artificiality, demand characteristics, non-standardised instructions and procedures
- Minimising extraneous and confounding variables – standardised instructions and procedures

Sampling procedures:

- convenience sampling

Unit 4 changes

What's **new** in research methods/ethics? (2/2)

Ethics and professional conduct:

- Advantages and limitations of generalising and drawing conclusions from non-human animals in research

Unit 4: AoS 1 – Learning

What's new?

Some additional information compared with current
S/D

Unit 4: AoS 1 – Learning

Specifically what's new? (1/2)

- Mechanisms of learning:
 - areas of the brain and neural pathways involved in learning, synapse formation, role of neurotransmitters
 - developmental plasticity and adaptive plasticity of the brain: changes to the brain in response to learning and experience; timing of experiences
 - use of imaging technologies in identifying changes in the brain due to learning

Unit 4: AoS 1 – Learning

Specifically what's new? (2/2)

- Applications of classical conditioning: graduated exposure, aversion therapy, flooding
- Three-phase model of operant conditioning: positive and negative reinforcement, response cost, punishment and schedules of reinforcement
- Applications of operant conditioning: shaping, token economies
- Insight learning – Kohler

Unit 4: AoS 2 – Mental Health

Specifically what's new?

- Focuses on mental **health** as opposed to mental **illness**
- Includes content:
 - ❖ from current Unit 2 (normality, classification of mental disorders)
 - ❖ from current Unit 3 (stress – fight/flight response, GAS)
 - ❖ that is new
 - ❖ that is 'compulsory' as well as one 'optional' topic

Unit 4: AoS 2 – Mental health

Specifically what's new?

Use of biopsychosocial framework to consider physical and mental health

Biopsychosocial framework

Basic premise:

- Biological, psychological (thoughts, feelings, emotions) and social factors are all involved in understanding mental health/mental illness
- Considers the role of each of these factors in causes and treatment of mental health/illness

Unit 4: AoS 2 – Mental Health

Specifically what's new?

- eustress and distress
- Lazarus and Folkman Transactional Model of Stress and Coping
- Social, cultural and environmental factors that exacerbate and alleviate stress
- **Allostasis** as a model that integrates biological, psychological and social factors to explain stress
- Strategies for coping with stress: biofeedback, meditation/relaxation, exercise, social support

Allostasis

stability brought about by the brain's regulation of the body's response to stress

Unit 4: AoS 2 – Mental Health

Specifically what's new?

- Applying the biopsychosocial framework to understanding and managing simple (specific) phobia:
 - biological factors: role of stress response; role of neurotransmitter gamma-amino butyric acid (GABA) in managing phobic anxiety
 - psychological factors: psychodynamic, behavioural, cognitive models; use of psychotherapies – CBT, systematic desensitisation and flooding

Unit 4: AoS 2 – Mental Health

Specifically what's new?

- **socio-cultural factors**: specific environmental triggers; parental modelling, transmission of threat information
- **interaction between biological, psychological and socio-cultural factors** contributing to the understanding and management of the disorder

Unit 4: AoS 2 – Mental Health

Specifically what's new?

Apply the biopsychosocial framework to **one** specified mental illness:

MOOD DISORDER: DEPRESSION

OR

ADDICTIVE DISORDER: GAMBLING

OR

PSYCHOTIC DISORDER: SCHIZOPHRENIA

Unit 4

What's OUT

- Learning set
- Area of Study – Research Investigation

Assessment

Overview: School-assessed Coursework

- **Greater range of assessment tasks**
- **Some retained, some modified and some new assessment tasks**
- **One prescribed assessment task in each unit & choice of other ATs:**
 - Unit 3: Report of research investigation (ERA report)
 - Unit 4: Annotated folio of practical activities

School-assessed Coursework Assessment Tasks

Now...

Assessment tasks for Units 3 and 4 are:

- empirical research activity
- essay
- annotated poster
- multimedia presentation
- test – short answer and extended response
- summary of research findings in at least two related studies

From 2011...

Assessment tasks for Units 3 and 4 are:

- research investigation
- essay
- visual presentation, for example, concept map, graphic organiser, poster
- oral presentation using two or more data types, for example still or moving images, written text, sound
- test
- evaluation of research
- annotated folio of practical activities
- media response
- data analysis

Unit 3 School-assessed Coursework

- Comprises 17% of total assessment
- **FOUR** assessment Tasks across the unit

Pair A (for either Outcome 1 or Outcome 2):

report of a research investigation conducted by the student (compulsory)

AND one other:

data analysis or media response or test

Pair B (for other Outcome):

Any two from:

evaluation of research, data analysis, essay, media response, annotated folio of practical activities, oral presentation using two or more data types, test, visual presentation

Unit 3 School Assessed Coursework

Outcomes	Marks allocated	Assessment Tasks
Outcome 1 or Outcome 2	<u>Pair A</u> 30 20	Report of a research investigation AND <u>one</u> task selected from: data analysis media response test
Outcome 1 or Outcome 2	<u>Pair B</u> 25 25	<u>Two</u> tasks selected from: evaluation of research data analysis essay media response annotated folio of prac activities oral presentation test visual presentation



School assessed coursework : Unit 4

- Comprises 17% of total assessment
- **FOUR** Assessment Tasks across the unit

Pair A (for either Outcome 1 or Outcome 2):

annotated folio of practical activities (compulsory)

AND one other from:

essay or test or visual presentation

Pair B (for other Outcome):

Any two from:

evaluation of research, data analysis, essay, media response, report of a research investigation conducted by the student, oral presentation using two or more data types, test, visual presentation

Unit 4 School-assessed Coursework

Outcomes	Marks allocated	Assessment Tasks
Outcome 1 or Outcome 2	<p><u>Pair A</u></p> <p>30</p> <p>20</p>	<p>Annotated folio of prac activities</p> <p>AND</p> <p><u>one</u> task selected from:</p> <p>essay</p> <p>test</p> <p>visual presentation</p>
Outcome 1 or Outcome 2	<p><u>Pair B</u></p> <p>25</p> <p>25</p>	<p><u>Two</u> tasks selected from:</p> <p>evaluation of research</p> <p>data analysis</p> <p>essay</p> <p>media response</p> <p>report of a research investigation</p> <p>oral presentation</p> <p>test</p> <p>visual presentation</p>

Assessment: Examinations

Unit 3 mid-year exam & Unit 4 end of year exam

- Each exam comprises 33% of final assessment
- Duration: 90 minutes + 15 minutes reading time
- Two compulsory sections: Section A: Multiple-Choice questions & Section B: Short-Answer questions
- Sample questions will be prepared early in 2011

Overview of changes - Examinations

1. Each Area of Study comprises approximately 50% of questions for each exam
2. Separate Areas of Study will not be flagged in exams
3. Research method questions integrated throughout each exam
4. End of year exam will assess research methods specified for Unit 4 (which includes Unit 3 research methods)
5. Each exam will contain one extended response question worth approximately 10-15 marks as part of Short-Answer section
6. Unit 4 - Mental Health option could be assessed by Multiple-Choice and/or Short-Answer questions, but not an extended response question

Sample exam questions

**** Note:** The following sample exam questions have not been subjected to the usual rigorous vetting processes of exam questions.

U3: Sample multiple-choice questions

****Questions 1 & 2 refer to the following scenario.**

Rajit had been working on a project in New York and he had only been able to sleep for 3 hours over 2 days before he went to catch his plane home to Melbourne. However, due to heavy snow, his flight was delayed for 13 hours and despite being extremely tired, he was unable to sleep at the airport because he was afraid he would miss the call to board his plane. While he was waiting he automatically drifted off into short periods of drowsiness or sleeping despite being awake and being unaware that this had occurred to him.

****Question 1**

Rajit was likely to be experiencing

- A. daydreaming where his EEG pattern would have resembled the early stages of NREM sleep
- B. a microsleep where his EEG pattern would have resembled the early stages of NREM sleep
- C. stage 2 sleep
- D. REM sleep

U3: Sample multiple-choice questions

****Question 2**

Eventually, when Rajit boarded his plane, he fell asleep very quickly and he remained asleep for 18 hours. This was because Rajit was experiencing

- A. the sleep-wake cycle recovery
- B. REM rebound
- C. narcolepsy
- D. total sleep deprivation

****Question 3**

While Lisa was reading a book, her mother asked her a question. Lisa thought she hadn't heard what was said. When she was about to ask her mother to repeat the question, Lisa was able to 'hear' what her mother had asked. This effect is due to

- A. boredom.
- B. echoic memory.
- C. iconic memory.
- D. short-term memory.

U3: Sample multiple-choice questions

****Question 4**

After a number of times when it has been touched with the rod, the sea hare will learn that it is not threatened by this and will cease to withdraw its gills as the rod approaches, showing that it has formed a memory. Kandel's work has shown that

- A. formation of a short-term memory requires the formation of new protein molecules
- B. formation of a long-term memory requires the formation of new protein molecules
- C. Formation of a short-term memory requires the formation of new neurons
- D. formation of a long-term memory requires the activation of the occipital lobe

U4: Sample multiple-choice questions

**Question 1

The biopsychosocial framework is best described as

- A. the study of genes to understand mental illness
- B. the study of an individual's social and cultural background in order to understand and treat his mental illness
- C. the study of an individual's psychological background
- D. the study of the interaction of the biological, socio-cultural, and psychological influences in the diagnosis of mental illness

U4: Sample multiple-choice questions

****Use the following scenario to answer Questions 2-5**

Jenna is suffering from fear of flying. She seeks the help of a clinical psychologist so that she might overcome this fear and be able to travel interstate on a plane with her family for a holiday. The psychologist treats Jenna over several sessions.

****Question 2**

The treatment that was used to gradually help Jenna to overcome her fear of flying is called _____ .

- A. flooding.
- B. systematic desensitization.
- C. counter-conditioning.
- D. aversion therapy.

U4: Sample multiple-choice questions

**Question 3

The psychologist could also use a therapy in which Jenna would be taught to change the way she was thinking about flying – so that she can begin to feel that it is excitement that is contributing to her arousal, rather than fear.

This psychologist has used

- A. CBT (cognitive behavioural therapy)
- B. TA (transactional analysis)
- C. psychoeducation
- D. relaxation therapy

U4: Sample multiple-choice questions

****Question 4**

Gamma-aminobutyric acid (GABA) is an inhibitory neurotransmitter. Jenna could be treated with a medication that increases the amount of GABA available in her brain.

This would have the effect of

- A. making Jenna more relaxed and reduce her muscle tension.
- B. increasing the production of neurotransmitters that cause Jenna to feel happy.
- C. sedating Jenna so that she becomes sleepy.
- D. making Jenna's muscles numb so that she has little feeling.

U4: Sample multiple-choice questions

**Question 5

Phobias are complex behaviours because they tend to

- A. have their origins in classical conditioning and be maintained by operant conditioning.
- B. have their origins in operant conditioning and be maintained by classical conditioning.
- C. have their origins in modelling and be maintained by operant conditioning.
- D. have their origins in modelling and be maintained by classical conditioning.

Extended response questions

- It is likely there will be one extended response question in the mid year exam and one in the end of year exam
- extended response questions will be asked as part of the short-answer section of the exam
- extended response questions may be asked in relation to any one or more Area of Study, research methods and ethics or in any combination of these.

U4: Sample extended response question

***Give an example of a simple phobia and explain the roles of classical conditioning and operant conditioning in the acquisition and maintenance of this phobia. In your response ensure that you use the appropriate terminology for classical and operant conditioning.*

(11 marks)

U4: Possible answer - extended response

*Claustrophobia is an extreme fear of confined spaces. This phobia may be acquired by **classical conditioning**, for example when a person is trapped in a lift for several hours, the **Unconditioned Stimulus (UCS)** – the danger of the situation leads to the **Unconditioned Response (UCR)** - fear caused by the danger. The UCS is paired with the (to be) **Conditioned Stimulus (CS)** - the confined space in the lift.*

*After conditioning, the CS comes to elicit the **Conditioned Response (CR)** - fear of confined spaces.*

*After the conditioned response has been acquired, the phobia is maintained through **operant conditioning** . Every time the person avoids a confined space (by not taking a lift or by staying outside) this avoidance behaviour is **positively reinforced** as the person experiences a good feeling - relief , thereby maintaining the response of fearing confined spaces and continuing the behaviour of avoiding confined spaces next time this **antecedent condition** arises.*

Possible making guide – extended response

1 mark for each of the following:

- Identification of a phobia (can be stated in lay terms)
- Indication that acquisition occurs by classical conditioning
- Identification of UCS
- Identification of UCR
- Identification of CS
- Identification of CR
- Indication that a phobia is maintained by operant conditioning
- Identification of phobic behaviour
- Identification of reinforcement (Note: may be negative reinforcement – stop feeling anxious or positive reinforcement – feeling good)
- Identification of strengthening of phobic response
- Identification of antecedent condition

Overview of changes- Teacher advice

Resources list to be published on-line

Accessing the Study Design

- **Hard copies sent to schools in November 2009**
- **On-line at VCAA website:**

<http://www.vcaa.vic.edu.au/vcaa/vce/studies/futuresd.html>