UNSW
THE UNIVERSITY OF NEW SOUTH WALES

Frontiers in Brain Research

GENM0202

Course Outline
Summer session 2010

Subject authority:

Dr Renée Morris
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OBJECTIVES OF THE COURSE

The objectives of this course are a) to introduce the student to the structure and functions of the central nervous system including the brain and spinal cord, b) to allow the student to explore the current state of knowledge in various areas such as research into mental illness and degenerative disease, plasticity and repair of the nervous system, visual perception, stem cells research and genetic engineering

COURSE CO-ORDINATOR AND LECTURERS

Course co-ordinator: Dr. Renée Morris
renee.morris@unsw.edu.au

Lecturers in the course:
Professor Ken Ashwell
A./Professor Pascal Carrive
Dr. Carol Dobson-Jones
Dr. Kay Double
Dr. Kharen Doyle
Dr. Jan Fullerton
Dr. Renée Morris
Dr. Peregrine Osborne
M. Patrick de Permentier
Dr. Branka Spehar

COURSE STRUCTURE AND TEACHING ACTIVITIES

This is a 3 unit course and consists of

- 15 lectures. All lectures are held in LG02, Wallace Wurth Building
- 5 laboratory/practicum sessions, in G2/G4 or 101, Wallace Wurth Building

LECTURES AND PRACTICAL CLASSES

Week One

Day 1- Tuesday 5 January 2010

9:00 to 9:30	Welcome by Renée Morris
9:30 to 10:30	Cellular Architecture of the Brain and Spinal Cord / Lecture by Ken Ashwell
10:30 to 11:00	Morning Tea
11:00 to 1:00	Microscopic Structure of the Spinal Cord Laboratory Class by Patrick de Permentier
1:00 to 2:00	Lunch Break
2:00 to 3:00	Introduction to the Human Brain and Spinal Cord Lecture by Renée Morris
3:00 to 4:00	Structure and Function of the Cerebral Cortex Lecture by Renée Morris

Day 2- Wednesday 6 January 2010
NO CLASSES – ASSESSMENT PREPARATION TIME

Day 3- Thursday 7 January 2010
9:30 to 10:30 The Developing Nervous System
Lecture by Ken Ashwell
10:30 to 11:00 Morning Tea
11:00 to 1:00 Microscopic structure of the cerebrum and the cerebellum
Laboratory Class by Patrick de Permentier
1:00 to 2:00 Lunch Break
2:00 to 4:00 Introduction to the human brain and spinal cord
Practicum

Day 4- Friday 8 January 2010
NO CLASSES – ASSESSMENT PREPARATION TIME

Week Two

Day 5- Monday 11 January 2010
9:30 to 10:30 Quizz 1
10:30 to 11:00 Morning Tea
11:00 to 12:00 Spinal Cord Injury: Can we go Forward?
Lecture by Renée Morris
12:00 to 1:00 Title to be announced
Lecture by Branka Spehar
Perception and the Brain
1:00 to 2:00 Lunch Break
2:00 to 3:00 Brain and Plasticity
Lecture by Renée Morris

Day 6- Tuesday 12 January 2010
NO CLASSES – ASSESSMENT PREPARATION TIME

Day 7 – Wednesday 13 January 2010
9:30 to 10:30 Left Brain, Right Brain: What is the Difference?
Lecture by Ken Ashwell
10:30 to 11:00 Morning Tea
11:00 to 12:00 The Emotional Brain
Lecture by Pascal Carrive
12:00 to 1:00 The Addicted Brain
Lecture by Peregrine Osborne
1:00 to 2:00 Lunch Break
2:00 to 4:00 Perception, Memory and the Brain
Practicum

Day 8- Thursday 14 January 2010
NO CLASSES – ASSESSMENT PREPARATION TIME

Day 9- Friday 15 January 2010
NO CLASSES – ASSESSMENT PREPARATION TIME

Day 10- Monday 18 January 2010

9:30 to 10:30 Quizz
10:30 to 11:00 Morning Tea
11:00 to 12:00 Is There a Biological Basis for Mental Illness?
Lecture by Kay Double
12:00 to 1:00 Degenerative Brain Disease
Lecture by Kay Double
1:00 to 2:00 Lunch Break
2:00 to 3:00 Stem Cell-Based Therapy for Neurodegenerative Disease

Day 11- Tuesday 19 January 2010
NO CLASSES – ASSESSMENT PREPARATION TIME

Day 12- Wednesday 20 January 2010

9:30 to 10:30 Using Genes to Understand Brain: Genetics in Neuroscience
Lecture by Carol Dobson-Jones
10:30 to 11:00 Morning Tea
11:00 to 1:00 Brain Diseases
Practicum
1:00 to 2:00 Lunch Break
2:00 to 3:00 Genetic Basis of Bipolar Disorders
Lecture by Jan Fullerton

Day 13- Thursday 21 January 2010
NO CLASSES – ASSESSMENT PREPARATION TIME

Day 14- Friday 22 January 2010

9:00 to 11:00 Final exam

ASSESSMENT PROCEDURE

There will be two assessment sessions each consisting of 30 MCQs (20% of final mark each), one short essay-type final exam (20 % of final mark) and one 1,500 word assignment (40% of final mark).