



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 and 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 Parmentier
Dr. Branka Spehar
Dr. Elizabeth Tancred

COURSE STRUCTURE AND TEACHING ACTIVITIES

This is a 3-unit course and consists of lectures and laboratory/practicum sessions. Lectures are held in Biomed E lecture theater. laboratory/practicum sessions are held 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 Brake
2:00 to 3:00	Introduction to the Human Brain and Spinal Cord Lecture by Elisabeth Tancred
3:00 to 4:00	Structure and Function of the Cerebral Cortex Lecture by Elizabeth Tancred

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 Introduction to the spinal cord
Laboratory Class by Patrick de Parmentier
- 1:00 to 2:00 Lunch Brake
- 2:00 to 4:00 Microscopic structure of the cerebrum
Laboratory Class by Patrick de Parmentier

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 Brake
- 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 Brake
- 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 Brake
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 Brake
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

9:30 to 11:30 Short essay examination

ASSESSMENT PROCEDURE

There will be two quizzes, each consisting of 25-30 multiple choice questions (20% of final mark each), one short essay examination (30% of final mark) and one 1,500-word assignment (30% of final mark). The 1,500-word assignment is due on Monday 8 February before 5:00 pm. Penalty for late assignment submission will apply.

ATTENDANCE REQUIREMENTS AND BEHAVIOUR

Attendance at practical classes, laboratory sessions and lectures is compulsory. Attendance **MUST** be recorded in the class roll **ON THE DAY OF THE CLASS**. Punctual arrival is expected. It is expected that students turn off their mobile phone before entering the lecture theater or practical classes.

IMPORTANT NOTES CONCERNING SAFETY

All classes held in Room 101 require the following:

- Enclosed footwear (i.e. no sandals or thongs)
- No smoking, eating or drinking
- Wearing of protective disposable coats (these will be provided)

OFFICIAL COMMUNICATION BY EMAIL

All students in GENM0201 are advised that email is the official means by which the School of Medical Sciences at UNSW will communicate with you. All email messages will be sent to your official UNSW email address and, if you do not wish to use the University email system, you MUST arrange for your official mail to be forwarded to your chosen address. The University recommends that you check your email at least every other day. Facilities for checking email are available in the School of Medical Sciences and in the University Library. Further information and assistance is available from DIS-Connect (phone: 8365 1777). Free email courses are held by the UNSW Library.

PLAGIARISM

The School of Medical Sciences will not tolerate plagiarism in submitted written work. The University regards plagiarism as academic misconduct (http://www.student.unsw.edu.au/academiclife/assessment/academic_misconduct.shtml) and imposes severe penalties. Evidence of plagiarism in submitted assignments, etc. will be thoroughly investigated and may be penalised by the award of a score of zero for the assessable work. Flagrant plagiarism will be directly referred to the Division of the Registrar for disciplinary action under UNSW rules.

The attention of students is drawn to the following extract from the above website: "The basic principles are that you should not attempt to pass off the work of another person as your own, and it should be possible for a reader to check the information and ideas that you have used by going to the original source material. Acknowledgment should be sufficiently accurate to enable the source to be located speedily."

The following are some examples of breaches of these principles:

- a) Quotation without the use of quotation marks. It is a serious breach of these rules to quote another's work without using quotation marks, even if one then refers to the quoted source. The fact that it is quoted must be acknowledged in your work.
- b) Significant paraphrasing, e.g., several sentences, or one very important sentence, which in wording are very similar to the source. This applies even if the source is mentioned, unless there is also due acknowledgment of the fact that the source has been paraphrased.
- c) Unacknowledged use of information or ideas, unless such information or ideas are commonplace.
- d) Citing sources (e.g., texts) which you have not read, without acknowledging the 'secondary' source from which knowledge of them has been obtained."

Appropriate citation of sources therefore includes surrounding any directly quoted text

with quotation marks, with block indentation for larger segments of directly-quoted text. The preferred format for citation of references is an author-date format with an alphabetically arranged bibliography at the end of the assignment. Note that merely citing textbooks or website URLs is unlikely to yield a bibliography of satisfactory standard. The internet should be avoided as a primary source of information (particularly Wikipedia). Inclusion of appropriate journal articles, both primary research publications and reviews, is usually expected.

OH & S – Safety Guidelines

Generic Safety rules for the School of Medical Sciences can be found at the URL below.

<http://medicalsciences.med.unsw.edu.au/SOMSWeb.nsf/page/Policies%20and%20Procedures>