Frontiers in Neuroscience
GENM0202

Course Outline
Summer session 2013
Monday 7 January to Wednesday 23 January

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, stem cells research and genetic engineering, etc.

IMPORTANT NOTES:
   • Students must wear enclosed shoes in the dissecting room
   • No eating or drinking in the dissection and practicum rooms
   • Mobile phone must be switched off during all lectures, laboratories and practicums

COMMUNICATION
Email is the official means by which the School of Medical Sciences at UNSW will communicate with you. It is recommended that you check your email every day.

PLAGIARISM
UNSW does not tolerate plagiarism in submitted written work. Please refer to https://my.unsw.edu.au/student/atoz/Plagiarism.html for more details about what constitutes plagiarism.

ATTENDANCE
Students are expected to be regular and punctual in attendance at all classes in the course. Please note that attendance will be recorded for practical classes and students are expected to attend at least 80% of these practicums.

APPLICATIONS FOR CONSIDERATION
Students must submit an application for consideration within three working days when sickness or circumstance beyond their control prevent them from completing a course requirement or significantly affect their performance in examination, class test, laboratory test, etc. The form can be downloaded from: https://my.unsw.edu.au/student/academiclife/Forms.html#SpecialConsideration

LECTURERS
Professor Ken Ashwell
Mr Andrew Tosolini
Dr Renée Morris
Dr Amanda Craig
Dr Penelope McNulty
Dr Carol Dobson-Jones
Dr Kharen Doyle
Dr Gila Moalem Taylor
Dr Tim Karl
A/Prof Kay Double
Prof Cindy Shannon Weickert
A/Prof Arun Krishnan

Practical classes will be under the authority of Mr. Patrick de Permentier and Mr. Andrew Tosolini as well as of Dr. Renée Morris.
COURSE STRUCTURE AND TEACHING ACTIVITIES
This is a 6 unit of credit course and consists of:

- 20 lectures. All lectures are held in Biomed Lecture Theatre E (E 27 on Kensington campus map).
- 5 laboratory/practicum sessions, in 106/108 or 101, Wallace Wurth Building
- 2 revision tutorials on laboratory and practicum material and one general tutorial, location(s) to be announced

ASSESSMENT PROCEDURE
There will be three quizzes each consisting of MCQs (20% of final mark each) and one short answer-type final exam (40 % of final mark).

LECTURES, PRACTICAL CLASSES AND TUTORIAL SCHEDULE

Week One

Day 1- Monday 7 January
9:30 to 10:00 Welcome by Dr Renée Morris
10:00 to 11:00 "Cellular Architecture of the Brain and Spinal Cord"
Lecture by Prof Ken Ashwell
11:00 to 11:30 Morning Tea
11:30 to 12:30 "Introduction to the Human Brain and Spinal Cord"
Lecture by Mr Andrew Tosolini
12:30 to 1:30 Lunch
1:30 to 3:30 "Microscopic Structure of the Spinal Cord"
Histology laboratory 1 by Mr Patrick de Permentier

Day 2- Tuesday 8 January
10:00 to 11:00 "The Developing Nervous System"
Lecture by Prof Ken Ashwell
11:00 to 11:30 Morning Tea
11:30 to 12:30 TBA
Lecture by Dr Renée Morris
12:30 to 1:30 Lunch
1:30 to 3:30 "Microscopic Structure of the Cerebrum and the Cerebellum"
Histology laboratory 2 by Mr Patrick de Permentier

Day 3- Wednesday 9 January
10:00 to 11:00 Revision Tutorial on Histology laboratory
Andrew Tosolini
11:00 to 11:30 Morning Tea
11:30 to 12:30 "Functional Localisation within the Cerebral Cortex 1"
Lecture by Dr Renée Morris
12:30 to 1:30 Lunch
1:30 to 3:30 "Introduction to the Human Brain and Spinal Cord"
Laboratory by Mr Andrew Tosolini and Dr Renée Morris

Day 4- Thursday 10 January
NO CLASSES – STUDY DAY

Day 5- Friday 11 January
10:00 to 11:00 QUIZ
11:00 to 11:30 Morning Tea/ Quiz Debrief
11:30 to 12:30 "Functional Localisation within the Cerebral Cortex 2"
Lecture by Dr Renée Morris
12:30 to 1:30 Lunch
1:30 to 2:30 "What is Multiple Sclerosis?"
   Lecture by A/Prof Arun Krishnan
2:30 to 3:30 "The Plastic Brain"
   Lecture by Dr Renée Morris

**Week Two**

**Day 6- Monday 14 January**
10:00 to 11:00 "Stroke: An Epic Tale of Death, Disability, and the Pivotal Penumbra"
   Lecture by Dr Amanda Craig
11:00 to 11:30 Morning Tea
11:30 to 12:30 "Functional Localisation within the Cerebral Cortex 3"
   Lecture by Dr Renée Morris
12:30 to 1:30 Lunch
1:30 to 3:30 Perception lab
   Mr Andrew Tosolini and Dr Renée Morris

**Day 7- Tuesday 15 January**
10:00 to 11:00 "Gene therapy for the treatment of brain disorders"
   Lecture by Dr. Renée Morris
11:00 to 11:30 Morning Tea
11:30 to 12:30 "Spinal Cord Injury: Can we go Forward?"
   Lecture by Dr Renée Morris
12:30 to 1:30 Lunch
1:30 to 3:30 Brain Disease Lab
   Mr Andrew Tosolini and Dr Renée Morris

**Day 8- Wednesday 16 January**
10:00 to 11:00 "Using Genes to Understand Brain: Genetics in Neuroscience"
   Lecture by TBA
11:00 to 11:30 Morning Tea
11:30 to 12:30 "Stem Cell-Based Therapy for Neurodegenerative Disease"
   Lecture by Dr Kharen Doyle
12:30 to 1:30 Lunch
1:30 to 2:30 "Neuro-immune crosstalk in multiple sclerosis and chronic pain"
   Lecture by Dr Gila Moalem Taylor
2:30 to 3:30 Revision Tutorial on laboratories
   Mr Andrew Tosolini

**Day 9- Thursday 17 January**
NO CLASSES – STUDY DAY

**Day 10- Friday 18 January**
9:30 to 11:00 QUIZ
11:00 to 11:30 Morning Tea/ Quiz Debrief
11:30 to 12:30 TBA
12:30 to 1:30 Lunch
1:30 to 2:30 "Cannabinoid in Schizophrenia"
   Lecture by Dr. Tim Karl
2:30 to 3:30 Title TBA
   Lecture by Dr Penelope McNulty
Week Three
Day 10- Monday 21 January
10:00 to 11:00  "Neurodegenerative diseases"
   Lecture by A/Prof Kay Double
11:00 to 11:30  Morning Tea
11:30 to 12:30  TBA
   Lecture by Prof. Cindy Shannon-Weickert
12:30 to 2:00   Lunch
2:00 to 3:00    Quiz

Day 11- Tuesday 22 January
NO CLASSES – STUDY DAY

Day 12 – Wednesday 23 January
10:00 to 12:00  Final Exam