Frontiers in Neuroscience

GENM0202

Course Outline
Summer session 2014

Wednesday 8 January to Wednesday 24 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 of research 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 practicum rooms
• No eating or drinking in the practicum rooms
• Mobile phone must be switched off during all lectures, laboratories and practicums
• Lab coats are mandatory in Day 3 Practicums. For the students who do not have a lab coat, disposable lab coats will be available for $5.00 before the practicum.

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. All information for the course including slide presentations and, where applicable, lecture notes will be posted on Moodle the day before the different activities.

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 Tim Karl
A/Prof Kay Double
Prof Cindy Shannon Weickert
Dr Ria Arnold
Doctor Georg Von Jonquiere.

PRACTICUMS
Practical classes will be under the authority of Mr. Patrick de Permentier, Mr. Andrew Tosolini, Mr Ziggy Harrison-Tikisci and Dr. Renée Morris.

COURSE STRUCTURE AND TEACHING ACTIVITIES
This is a 6 unit of credit course and consists of:
- 21 lectures. All lectures are held in Wallace Wurth lecture theatre LG03.
- 5 laboratory/practicum sessions. The two first practicums are held in Wallace Wurth G07-06 and the last three practicums are held in Wallace Wurth 115.
- The location for the three revision tutorials remains to be determined.

ASSESSMENT PROCEDURE
There will be two quizzes each consisting of short answers and MCQs (25% of final mark each) and one short/medium answer-type final exam (50 % of final mark).

LECTURES, PRACTICAL CLASSES AND TUTORIAL SCHEDULE

Week One

Day 1- Wednesday 8 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 "Gross Anatomy of 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- Thursday 9 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 “Functional Localisation within the Cerebral Cortex 1”
   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- Friday 10 January
10:00 to 11:00 "Functional Localisation within the Cerebral Cortex 2"
   Lecture by Dr Renée Morris
11:00 to 11:30 Morning Tea
11:30 to 12:30 Revision Tutorial on Histology laboratory
   Mr Andrew Tosolini and 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, Mr Ziggi Harrison-Tikisci and Dr
   Renée Morris
Week Two
Day 4- Monday 13 January
10:00 to 11:00 Quiz
11:00 to 11:30 Morning Tea/ Quiz Debrief
11:30 to 12:30 “The Visual Brain”
   Lecture by Dr Renée Morris
12:30 to 1:30 Lunch
2:30 to 3:30 “Perception lab”
   Mr Andrew Tosolini, Mr Ziggi Harrison-Tikisci and Dr Renée Morris

Day 5- Tuesday 14 January
10:00 to 11:00 "Stroke: Not just for Old Blokes"
   Lecture by Dr Amanda Craig
11:00 to 11:30 Morning Tea
11:30 to 12:30 "Neurodegenerative diseases"
   Lecture by A/Prof Kay Double
12:30 to 1:30 Lunch
1:30 to 3:30 “Brain Disease Lab”
   Mr Andrew Tosolini, Mr Ziggi Harrison-Tikisci and Dr Renée Morris

Day 6- Wednesday 15 January
10:00 to 11:00 The Autistic Brain"
   Lecture by Dr Renée Morris
11:00 to 11:30 Morning Tea
11:30 to 12:30 “Using Genes to Understand Brain: Genetics in Neuroscience"
   Lecture by Dr Carol Dobson-Jones
12:30 to 1:30 Lunch
1:30 to 2:30 “Cannabinoid in Schizophrenia"
   Lecture by Dr Tim Karl
2:30 to 3:30 Revision Tutorial
   Mr Andrew Tosolini and Dr Renée Morris

Thursday 16 January
NO CLASS- STUDY DAY

Day 7- Friday 17 January
10:00 to 11:00 QUIZ
11:00 to 11:30 Morning Tea/ Quiz Debrief
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 "Gene therapy for the treatment of brain disorders"
   Lecture by Dr Geog Von Jonquiere
2:30 to 3:30 "Spinal Cord Injury: Can we go Forward?"
   Lecture by Dr Renée Morris

Week Three
Day 8- Monday 20 January
10:00 to 11:00 "What is Multiple Sclerosis?"
   Lecture by Dr Ria Arnold
11:00 to 11:30  Morning Tea
11:30 to 12:30  “The Emotional Brain”
   Lecture by A/Prof Pascal Carrive
12:30 to 1:30  Lunch
1:30 to 2:30  “The Plastic Brain”
   Lecture by Dr Renée Morris
2:30 to 3:30  TBA
   Lecture by Dr Penelope McNulty

Day 9- Tuesday 21 January
10:00 to 11:00  “The Spongiform Brain”
   Lecture by Dr Renée Morris
11:00 to 11:30  Morning Tea
11:30 to 12:30  “Motor Neuron Disease”
   Lecture by Mr Andrew Tosolini
12:30 to 1:30  Lunch
1:30 to 2:30  “Mental Illness”
   Lecture by Cyndi Shannon-Weikert
2:30 to 3:30  Revision Tutorial
   Mr Andrew Tosolini and Dr Renée Morris

Day 10 and 11- Wednesday 22 January and Thursday 23 January
NO CLASS – STUDY DAYS

Day 10- Friday 24 January
10:00 to 12:00  Final Exam