

Neuroresearchers Fund: Summer School Short Report

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Background:

- Three-day course entitled ‘Human Brain Anatomy’ at University College London running from 18th – 20th July, 2011.
- Gives a detailed overview of human brain anatomy, emphasising functional and clinical neuroanatomy.
- Combines lectures and practicals, to enable full understanding and learning of the 3D structure of the brain, as well as the functional and clinical relevance of the different parts of the brain.
- Course outline:
 - Basic neurobiology
 - Overview of nervous system
 - Neurodevelopment
 - Major structures including sulcal & gyral pattern
 - Topography & functional anatomy
 - Basal ganglia & cerebellum
 - Cranial nerves & major arteries

Aims and related outcomes:

- Extend our knowledge of the human brain topography and functions
 - Applied topographical knowledge learnt to identify lateral, medial and ventral boundaries of the frontal lobe
 - Involvement with international imaging/genetics consortium project
 - Aided marking of neuroanatomy module for the Neuroimaging MSc
- Improve understanding of terminology in papers
 - Facilitated comprehension of conflicting terminology used for defining anatomical boundaries
- Gain a 3-D understanding of the relationship between brain structures
 - Helped in the validation of an automated software that segmented numerous subcortical structures
 - Aided interpretation of voxel activations following fMRI scans
 - Enabled more appropriate recruitment of patients for study
- Improve understanding of the clinical relevance of various brain regions
 - Improved working practice during clinical assessment
- Relate the anatomical knowledge gained to image analysis
 - Assisted stroke lesion delineation in segmentation work
 - Will aid voxel-based symptom-lesion mapping work
- Increase independence in brain anatomy to enable more autonomous working practice
 - Tutoring anatomy and associated topics for the Neuroimaging MSc.
- Disseminate information to colleagues both within BRIC and within the wider neuroscience community
 - Neuroanatomy presentation given at BRIC seminar series

Short Summary (for website):

In July 2011 Anna Jones and Natalie Royle attended a 3-day neuroanatomy course at University College London run through NeuroCourses UK. The course consisted of lectures discussing neurobiology, neurodevelopment, topography, major anatomical structures and some basic functional anatomy. Practical sessions, involving human brain specimens and 3D brain models, were given to consolidate information learned during the lectures. Excellent teaching from Dr P. Johns and continuous support from demonstrators enabled us to gain a large degree of knowledge in a short time period. The course has been considerably beneficial to our ongoing research and we would highly recommend it to anyone is interested in furthering their anatomical understanding of the human brain.