

Syllabus

- Anatomical techniques
- Physiological techniques
- Molecular biological techniques
- Behavioural techniques
- Neurochemistry
- Chemoarchitecture
- Modulation of neurone excitability
- Development of neuronal connections
- Spinal Cord
- Brainstem
- Diencephalon
- Cerebral cortex
- Brain Development
- Brainstem
- Vision
- Glial cells
- Audition
- Axovacs (Physiol)
- Blood Supply & Meninges
- Sensory Pathways
- Chemical Sensory Pathways
- Limbic Structures
- Feeding / Thirst / Sex
- Memory

Recommended Reading

- Textbook: Kandel E, Schwartz J, & Jessell T. Principles of Neural Science (4th ed), McGraw Hill

Authors: Dario Protti & Kevin Keay, October 2005

For more information

Anatomy & Histology

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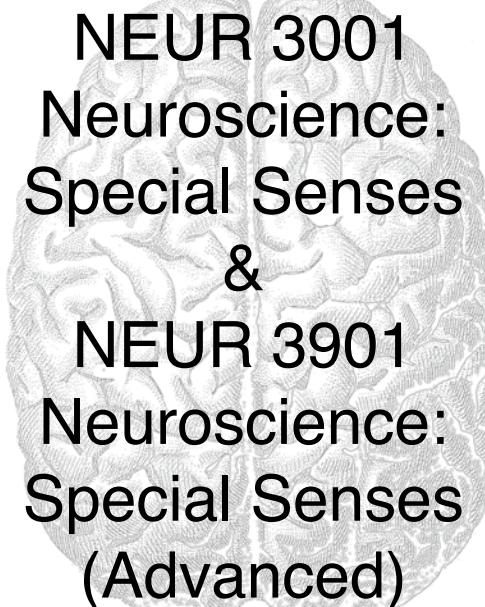
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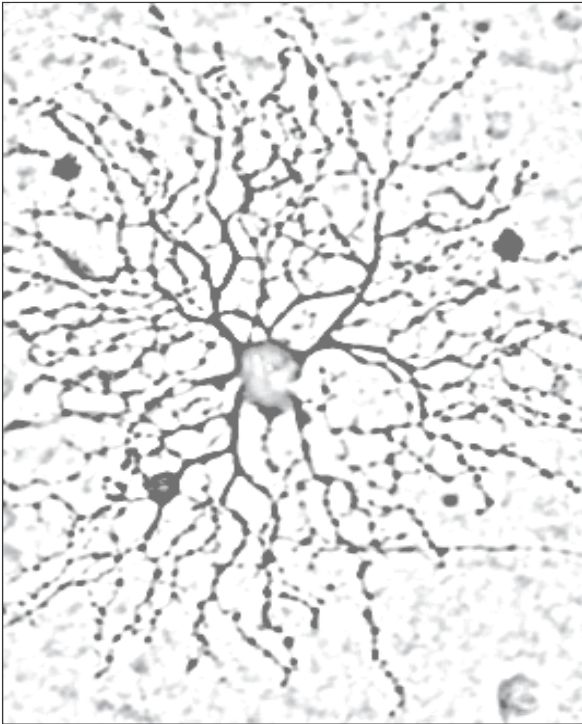
Anatomy & Histology



NEUR 3001
Neuroscience:
Special Senses
&
NEUR 3901
Neuroscience:
Special Senses
(Advanced)



The University of Sydney



Unit Of Study

The aim of this course is to provide students with an introduction to the structure and function of the nervous system and to the main concepts of processing of sensory information. Understanding basic sensory transduction mechanisms and the function of the sensory systems is necessary to understand how perceptual processes work in normal and disease conditions and provides a gateway to unravel the complexity of the mind. Basic aspects of low and high level sensory processing in all sense modalities will be covered, with a special emphasis in the auditory and visual systems. The relationship between sensory systems, perception and higher cognitive functions will be addressed.

Prerequisites

For BMedSc students: BMED(2801 or 2503) and BMED(2806 or 2505) For other students: (PHSI(2101 or 2001 or 2901 or 2005 or 2905) or ANAT(2003 or 2010) and 6 credit points of MBLG.

Learning Goals & Outcomes

LEARNING GOALS:

The aim of this course is to give students a comprehensive view of the structure and function of the human nervous system. The current knowledge of how the brain works is based on the analysis of the normal structure of the nervous system and its pathways, the functional effects of lesions and neurological diseases in different parts of the nervous system, and the way that nerve cells work at the molecular, cellular and integrative level.

The lecture course addresses different topics, each of which offers special insight into the normal function of the nervous system in health and disease.

The practical component of the course consists of small group tutorials in neuroanatomy, experimental and computer based sessions on physiological methods, and small group sessions in which you will discuss current research papers related to the lecture topics. Students will have the opportunity to examine human brain specimens during the tutorials, and in the Wilson Museum. Computer based facilities which allow students to learn the brain structures by simulated dissection are also available.

LEARNING OUTCOMES:

Students that successfully complete this course will:

- have an understanding of the principles governing the organisation of the central nervous system, at both structural and functional levels
- be familiar with major neuroscientific terms
- have an appreciation of the contribution of ongoing research into the advancement of neuroscience, that it is a very dynamic and ever changing field
- develop skill in scientific writing and scholarship

Timetable

N.B. - Please check online timetable for latest details as times & locations vary

Class Location

- Eastern Avenue Lecture Theatre: Eastern avenue, Main campus
- General Lecture Theatre: room N205, Main quadrangle, University place, Main campus
- Anatomy Tutorial rooms: check location on notice boards on level 4 outside the Anatomy service room E428, Anderson Stuart building, Eastern avenue, Main campus
- Anderson Stuart Teaching rooms: [Physiol Practical classes] Check Physiology dept. for location details

Gown & Glove Policy

This course has a gown & glove policy for the tutorial classes. This course also recommends vaccinations. Please see the Anatomy website for details.

Attendance

It is a requirement of this unit that students attend no less than 80% of all tutorials and practical classes.