

Neuroscience & Behaviour

The second module of the year introduces you to how we walk, talk, feel and experience the world about us. The module looks at how the brain receives, processes and relays sensory information; cellular signal transmission. The module also covers brain chemistry during disease and effects of drugs on the brain. This module consists of roughly 73 sessions.

Topics Covered

- **Head and neck anatomy** – pharynx, intracranial region, orbit and eye, ear, neck, thyroid, larynx, face and mouth, nose.
- **Neuroanatomy** – brainstem, forebrain.
- **Neuroscience** – neurones and action potentials, interneuron communication, autonomic nervous system, histology, glia, pain, neuronal plasticity, higher brain functions, imaging, pathology.
- **Movement and somatosensory system** – spinal reflexes, supraspinal control, somatosensory pathways/transduction, vestibular system, posture and balance.
- **Special senses and memory** – eye, vision pathways, auditory processing, pathology.
- **Embryology** – craniofacial development, neural tube defects, nervous system, brain.

Learning Methods

- Lectures – usually a one-hour teaching session.
- PBL – problem-based learning, with a tutor in a small group.
- SPL – self paced learning, homework tasks that you can tackle at your own pace.
- Practical – active session.
- Anatomy laboratory – cadaver dissections with supervision.

Resources

- Dean MC & Pegington J. Core Anatomy for students Vol 3, The Head & Neck.
- Fitzgerald's clinical neuroanatomy and neuroscience. Estomih Mtui, Gregory Gruener, Peter Dockery, M. J. T. FitzGerald 2016.
- The nervous system: basic science and clinical conditions - Michael-Titus, Adina, Revest.
- Neuroscience: exploring the brain. Mark F. Bear, Barry W. Connors, Michael Paradiso.
- Neuroanatomy: an illustrated colour text. A. R. Crossman, David Neary, Ben Crossman.

Tips

- Try your best to keep up with head and neck anatomy but do not worry if you fall behind as that's expected.
- Neuroanatomy forms the basis of all neurophysiology teaching – learn this well near the beginning of the module and it will help later.
- Attending lectures is valuable as neuro teaching tends to be extremely good.

For more details, visit the module Moodle page.