Brainstorm:
BIG IDEAS IN NEUROSCIENCE

Course Overview

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WWW.EMSCI.VIC.EDU.AU

Brainstorm: BIG IDEAS IN NEUROSCIENCE

emerging sciences victoria

Brainstorm will tackle what we already know about the brain and how cutting edge technologies are changing this, using a mix of videos, discussion, practical activities, guest speakers, group and individual work.

Join us in exploring some of the big ideas in neuroscience and unleash your brainstorm:
How do we image the brain and can we see thoughts?
How do sleep and chemicals affect the brain?
Bionic brains – how can we replicate senses and understand illusions?

Learning Focus

Focus 1: How do we image the brain and can we see thoughts?

- Introduction to the Nervous System
- Previous techniques to tell what someone is thinking/lying.
- Methods for Observing Brain Activity

Focus 2: How do sleep and chemicals affect the brain?

- How do neurons communicate with each other?
- How local anesthetics work
- Exploring Neurotransmitters
- How do drugs (illicit and pharmaceutical) work on receptors?

Focus 3: Bionic brains - how can we replicate senses and understand illusions?

- Introduction to senses & sensory tricks
- Structure of the Eye/Receptor Cells in the Retina
- How the Bionic Eye Works
- Can we create the human experience in robots?

Homework

Students will be required to complete on average 1 hour of homework per week.

Assessment

For successful completion of this unit students will be required to submit three assessment tasks. Students will also be assessed on regular attendance.