

MALTA
NEUROSCIENCE
NETWORK

The Brain: What do we know about this complex organ?

This tour is one of the different events organised throughout BRAIN AWARENESS WEEK (11-15 March), a global campaign to increase public awareness of the progress and benefits of brain research, organised in Malta by the Malta Neuroscience Network programme of the University of Malta. This tour aims to give a brief introduction on how the brain works, explain what happens when things go wrong, demonstrate systems that are used to record brain activity, describe how this information is used to learn more about the brain and show how technology can assist people with severe motor impairments. The tour consists of visits to a number of laboratories, with details of each lab visit given below. The tours are scheduled on Tuesday 13th, Wednesday 14th and Thursday 15th March 2019. A programme is available on the next page. For more information and reservations, please contact Dr Tracey Camilleri: tracey.camilleri@um.edu.mt

Lab Visit 1: A healthy body is a healthy mind

Our brain is the hungriest organ in our body as it consumes a staggering 20% of the total energy. Yet what happens when a part of the brain is interrupted from its blood supply as happens during a stroke? How are the nerve cells and support cells affected and what are the signs and symptoms of a stroke? How do we study the brain? In this short class presentation, we will highlight some of the exciting research going on in the Department of Physiology & Biochemistry that sheds light on the inner workings of the brain.

Lab visit 2: Human Machine Interfaces

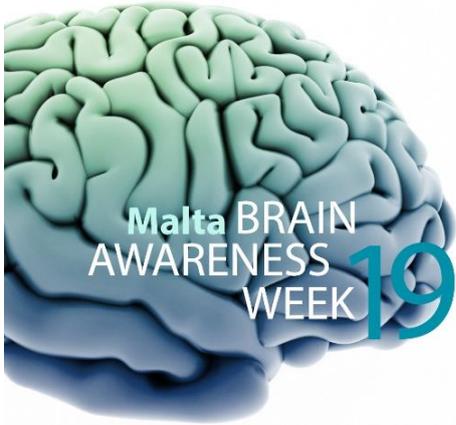
Have you ever wondered what your brain signals look like? And do you know how the brain processes the things that we see? Brain signals and eye movements can be used to control a computer instead of using a keyboard, touchscreen or mouse. The Department of Systems and Control Engineering, in collaboration with the Centre for Biomedical Cybernetics, will show you various equipment that allow for the recording of brain signals and eye movements and how these bio-signals can be used for the development of human machine interface systems. Come and see your own brain signals on screen and control devices with your eyes!

Lab visit 3: Techniques for exploring mind and brain

The Cognitive Science Department conducts research with human participants using a variety of tasks and techniques. Our goal is to understand better how the human mind works. Our laboratory facilities include testing booths, sound and vision equipment, eye trackers and EEG recording. Typically, participants perform simple tasks on computers or tablets while we monitor their behaviour both explicitly (e.g., speed and accuracy of responses) and implicitly (e.g., eye movement and brain wave patterns). Do you want to see how you perform on some of these tasks? Join us to find out!

Lab visit 4: The brain and sound *(Wednesday only)*

At the audiology lab within the Faculty of Health Sciences students will have the opportunity to try out two tests: the acoustic reflex test and the dichotic listening test. The acoustic reflex test measurement gives us information about the ear function, as well as the brain's function. It can help with finding out if there is something wrong with the ear or parts of the brain related to hearing and listening. The dichotic listening test is widely used, also to detect problems with listening even though hearing may not be a problem. Dichotic listening refers to the listening of different sounds presented to each ear at the same time.



MALTA
NEUROSCIENCE
NETWORK

Brain Awareness Week – Lab Visits Programme

Tuesday 12th, Wednesday 13th and Thursday 14th March

8:45am: Meet up at quadrangle

9am – 9:45am:

Talk, “A healthy body is a healthy mind”

Department of Physiology & Biochemistry

10am – 12:00am:

Interactive lab visits

Department of Cognitive Science

*Department of Systems and Control Engineering & Centre for
Biomedical Cybernetics*

12:15pm – 1:00pm: (Wednesday only)

Interactive lab visits

Faculty of Health Sciences (Audiology Lab)

www.mnn.mt