



***** IMPORTANT*** To book a school visit please email:**

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**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 (16-20 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 17th and Wednesday 18th March 2020. A programme is available on the next page.

Around the brain in 30 minutes!

During this short presentation by Dr Christian Zammit, we will try to unravel some of the interesting facts regarding our brain and take a quick glimpse into complex functional organisation of our central nervous system.

Lab visit 1: Is your brain a computer?

The human brain is sometimes compared to a computer but what are the similarities or differences between the two? Undoubtedly, the brain is a very complex system but through technology we can read the brain signals non-invasively and display them on a computer. Do you want to see what your brain signals look like? At the Department of Systems and Control Engineering and at the Centre for Biomedical Cybernetics, we can show you this but not only; we will also explain how we can process these brain signals to allow a person to communicate with the computer without using a mouse or a keyboard. What is also interesting is how the eyes act as an input to the brain. Do you know that the eyes can actually play tricks on the brain? Come by our labs to learn more about all this.

Lab visit 2: 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 3: The brain and sound (Tuesday 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.

Lab Visit 4: A healthy body is a healthy mind (Wednesday only)

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.

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Brain Awareness Week – Lab Visits Schedule

Tuesday March 17th 2020

9am

Meet and Greet – Quadrangle

9:30am – 10am

Talk - Around the brain in 30 minutes!
Biomedical Sciences Building - Room 402

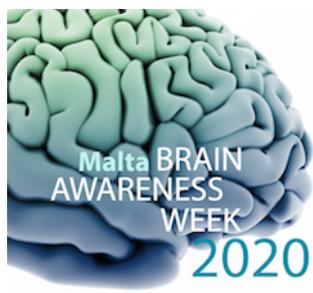
10am – 12pm

Lab visit - Human machine interfaces
Biomedical engineering lab – Faculty of Engineering building

Lab visit - Techniques for exploring mind and brain
Cognitive Science lab – Faculty of Media and Knowledge Sciences building

12:15pm – 12:45pm

Lab visit - The brain and sound
Audiology lab – Mater Dei Hospital



Brain Awareness Week – Lab Visits Schedule

Wednesday March 18th 2020

9am

Meet and Greet – Quadrangle

9:30am – 10am

Talk - Around the brain in 30 minutes!
Biomedical Sciences Building - Room 402

10am – 12pm

Lab visit - Human machine interfaces
Biomedical engineering lab – Faculty of Engineering building

Lab visit - Techniques for exploring mind and brain
Cognitive Science lab – Faculty of Media and Knowledge Sciences building

12:15pm – 12:45pm

Lab visit - A healthy body is a healthy mind
Department of Physiology & Biochemistry - Faculty of Medicine and Surgery