

# BN5209/6209: FRONTIERS IN NEUROTECHNOLOGY

## WHAT IS THIS MODULE ABOUT?

Neurotechnology provides technical tools for neuroscience research and clinical application. The continued innovation and development of neurotechnology allows us to explore wonders of our brain and mind, as well as to treat neurological and other diseases. This course introduces a variety of neuroengineering approaches to establish direct communication with nervous system and the mechanisms behind them. This course will cover the following topics: understanding of the nervous system from an engineering perspective, design of neuroelectronics, mechanical and biochemical requirements of neural interfacing materials, electrical/optical/biochemical/acoustic/magnetic neural interfaces and their applications in both research and clinical applications.



## WHY YOU SHOULD CONSIDER THIS MODULE

If you are interested to apply neural implant to treat diseases

If you are curious how to interact and communicate with the world directly with our brain

If you are excited by the recent development of neuroelectronics and neurotechnology

If you are considering working in a cool neurotechnology start-up such as Neuralink, Synchron etc.



**NUS**  
National University  
of Singapore

College of Design and Engineering

Department of Biomedical Engineering