**2019-2020 Psychology UQ Summer Research Project Description**

|  |  |
| --- | --- |
| **Project title:** | **Neural substrates of Brain stimulation** |
| **Project duration:** | * 8 weeks * 30 hours/week |
| **Position/s available** | 1 |
| **Description:** | While combined behavioural training and brain stimulation can improve a range of cognitive processes, it not yet known how brain function changes as a result, and how such changes are related to brain structure. This project aims to provide definitive evidence on the efficacy of cognitive training, brain stimulation and their combination for enhancing performance, and will reveal the underlying neural processes involved using MRI, MRS and FMRI. Outcomes and benefits include identifying the functional neural mechanisms and structural correlates of these effects for individuals and groups, informing cognitive training and stimulation approaches in a range of current settings, and a possible means of reducing the effects of age-related cognitive decline. |
| **Expected outcomes and deliverables:** | Scholars may gain skills in neuroscientific data collection, or have an opportunity to generate publications from their research. Students may also be asked to produce a report or oral presentation at the end of their project. |
| **Suitable for:** | Exposure to cognitive neuroscience research |
| **Primary Supervisor:** | Prof Paul E. Dux and Dr Hannah Filmer |
| **Further info:** | Email p.dux@psy.uq.edu.au |