香港城市大學
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A Laboratory-Based Curriculum for Multidisciplinary Studies of Brain-Machine Interface

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Abstract:

The advancement of technology has affected everyday healthcare in many ways, such as, the development of wearable medical devices, smart contact lenses that measures glucose levels in tears, and the ability to remotely monitor the vital status of elderly at home. In particular, implanted medical devices not only help extend and improve quality of life, but they are now also one of the most profitable businesses across the world. Therefore, a laboratory-based curriculum is essential for the students to obtain first-hand experience of exponential technologies like brain-machine interface. This proposal aims to facilitate the development of a course that builds a practical knowledge base of medical technology for a broad spectrum of students. With this laboratory and project-based curriculum, students will be able to understand the basic working principles behind a brain-machine interface, and gain hands-on experience of designing and/or operating a BMI device.