



香港城市大學  
City University of Hong Kong

## Bridging the Gap between Theory and Practice: A Hands-on, Self-guided Engineering Prototype Development Program

**Project Number:** 6000463

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### **Abstract:**

Theoretical simulations routinely used as a teaching tool in undergraduate science and engineering classes are often unable to capture the practical aspects of the physical reality. To circumvent this gap between theory and practice, it is imperative to let students experience, early in their educational career, the challenges faced in the realization of concepts.

The proposed program aims to create a platform for science and engineering students at CityU, typically in the senior undergraduate level, to go through a discovery-enriched self-guided project to realize concepts taught in the classroom. The program will provide the technical guidance and resources so that students can take a conceptual design and realize it with physical components through the process of prototyping. At the end of the project, students will demonstrate their prototypes in conferences.