香港城市大學
City University of Hong Kong

Nurturing undergraduate students in computational and experimental biomedical physics research

Project Number: 6000539

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Abstract:

The Discovery-Enriched Curriculum (DEC) aims at giving students studying at CityU an opportunity to make an original discovery, in such a way that they can be nurtured to create new knowledge, communicate it, curate it, and cultivate it to benefit society. The DEC has been a key element of CityU's Strategic Plan and Academic Development Proposal (ADP) 2012-2015. However, making an original discovery by an undergraduate student is not straightforward and will require well-planned nurturing and close supervision from the staff, and will also require the student to have sufficient knowledge and educational background.

The current project aims to create an environment for participating undergraduate students to perform computational and/or experimental biomedical physics research. This will involve interdisciplinary research areas, including applied physics, biology, nuclear engineering, bioengineering, computer modeling and mathematics, etc. As such, the participating students will be exposed to interdisciplinary knowledge outside the student's own curriculum and expertise, and to gain interdisciplinary research experience from this project.

The present project also aims to guide and nurture participating undergraduate students for research which leads to journal publications. An original discovery in science and engineering will be more complete if it can lead to journal publications. In this project, therefore, the participating students would have hands-on experience going through all steps in the cycle, including formulation of a research topic, learning new and required basic computational and/or experimental techniques for biomedical physics research, actual research work, and help in preparation of manuscripts to be submitted for publication in SCI journals.