



Development of Biomedical Devices through Continuous Experiential Learning for Grand Challenges Scholars Program (GCSP)

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Abstract No.: 6000720

Abstract

Initiated by National Academy of Engineering of USA, the Grand Challenges Scholars Program (GCSP) is a special education scheme combining curricular and extra-curricular elements for new generations of engineers. Research experience is an essential element of GCSP, but hard to fulfill in the field of biomedical engineering (BME) because BME research usually require demanding commitment of time and resources, which is challenging for both students and supervisors. Here, we propose a new model of research component for GCSP: Development of Biomedical Devices through Continuous Experiential Learning. Biomedical devices provides solution toward many Grand Challenges identified by GCSP, such as Advance Health Informatics and Water Safety. All BME students will be invited to join GCSP in their year 1-2, and interested students will be invited to propose their ideas to address this research theme for their summer research project. Moreover, selected student group will be invited to continue their exploration in the following academic year. Thus, adapting an acquisition-based pedagogy with prolonged exposure to research environment, this scheme allows students to be more engaged with research competence in GCSP and aligned with the spirit of Discovery-enriched Curriculum.