

Gearing up BME students for Biomedical Instrumentation with more hands-on practice

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Abstract:

Hands-on learning is key to training engineering students. Traditionally hands-on training is mainly provided through physical laboratory sessions in the course. However, physical lab sessions are limited in their duration (in time) and variety (in contents). In this proposal, we aim to integrate software tools in our teaching to maximize students' hands-on learning opportunities in the core course BME4101 Biomedical Instrumentation. We will tightly incorporate the use of several software tools in the course teaching and assessment, which allow the students to design, construct and evaluate electrical circuits systematically on their computer, without a steep learning curve on the tools. We believe that this will enhance their learning experience in the physical lab as well as in the course overall. We also believe that it will be helpful to students to translate the theory learnt in the lectures into real-life application. By completing this project, students would become more confident and more motivated in the problems related to biomedical instrumentations. The project will also encourage students to use these software tools to enhance their learning effectively. The success of our project will help nurture future engineering talents for the advancement of biomedical