

# BIEN 545. DIAGNOSTIC DEVICES AT THE POINT-OF-CARE.

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Credits: 3

Offered by: Bioengineering (Faculty of Engineering)

This course is not offered this catalogue year.

## Description

The fundamental of diagnosis devices from design concepts to implementation in real-life application, a brief review of the gold standard diagnostic methods and their limitations, the building blocks of an ideal diagnostic device with a focus on point-of-care applications, biomolecular recognition elements including different one-step and multi-step assays based on nucleic acids and proteins, and the fundamental of sample delivery systems and fluid flow based on microfluidics, the integration of bioassays and microfluidics in lab-on-chip devices for automated sample preparation and detection, real-life application of lab-on-chip devices in medical diagnosis and the commercialized approaches.

- (3-0-6)
- Prerequisite: BIEN 360, BIEN 314, or permission of the instructor
- Restrictions: Restrictions: Open to undergraduate (U3 or higher) and graduate students.

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