

Allegato 4

Proposta di corso per il Dottorato in Scienze Chimiche

Course title: **“Portable sensing devices and rapid screening methods for point-of-care testing (POCT)” “Dispositivi sensoristici portatili e metodi di screening rapido per “point-of-care testing (POCT)”**

Prof. Marco Giannetto

SSD: CHIM/01

N. of hours: 8 CFU: 1

Language: Inglese

The course will be focused on a comprehensive overview on simple and user-friendly sensing devices and disposable strips-based screening assays, allowing for out-of-hospital or @home diagnosis, POCT and follow up of different diseases. Features and performance of small and battery-operated electrochemical sensing instrumentation will be described and discussed, also in the perspective of the implementation of *Internet of Things (IoT)* systems allowing for easy visualization and sharing of data via *cloud* services. A description of working principles and performance of commercially available strips-based assays, not involving the use of dedicated instrumentation, will be also carried out. Front-end teaching will be associated to laboratory experiences, in order to show to PhD students different assays or screening tests specifically targeted on the assessment of biomarkers associated to several pathologies, ranging from autoimmune to metabolic or infective diseases.