

**Course Title:** *“Theories, techniques and instrumentations for the determination of bioanalites”*

**Duration:** 30 hours

**Instructor:** Giuseppe Arrabito

**Description of the course:**

Introduction to the theories, techniques and methodologies for the chemical analysis - both qualitative and quantitative - of relevant bioanalytes.

**Contents:**

- *Instrumental techniques and innovative methods for the qualitative and quantitative determination of bioanalytes within relevant environmental- and health- related matrices*
- *Detection methods for the analysis of bioanalytes: from optical to electronic transduction approaches*
- *Notes on the Ekin’s “Ambient analyte theory” for applications within microarray bioanalysis methods: from the detection limit estimation to the signal/noise ratio*
- *Methodologies and instrumentations for “point-of-care” analysis and diagnostics*
- *Statistical-mathematical analysis of analytical data and interpretation of results*
- *Notes on the use of bioinformatic databases for comparison of large-scale bioanalytical data*