

**TRAVAUX PRATIQUES CHIMIE-PHYSIQUE, PHOTONIQUE****LAB SESSIONS PCM****Lecturers:** Christelle YEROMONAHOS

| Lecturers : 0.0 | TC : 0.0 | PW : 24.0 | Autonomy : 0.0 | Study : 0.0 | Project : 0.0 | Language : FR

Objectives

This training makes it possible to grasp through experience, and therefore in a more intuitive way, fundamental concepts tackled in the "UE PCM" and to see their applications, particularly in the industrial field. It also makes it possible to tackle important concepts for an engineer, related to measurement and in particular to the development of measurement protocols. It is given only in the form of practical works.

Keywords : Nanotechnology, Imaging, Laser, Spectroscopy, Chromatography, Chemical kinetics, Electrochemistry, Intermolecular bonds

Programme

- Students will follow 3 practical works (TP) in physics: Frequency analysis - Fourier optics. Infrared thermography / solar cell. Spectrophotometry.
- The students will follow 3 practical works (TP) in chemistry: Electrochemical study of galvanic corrosion of metals. Study of redox reactions by UV-Visible spectrophotometry - Chemical kinetics. Gas chromatography.

Learning outcomes

- C2N1 (chemistry): Defines a system and its boundaries, identifies the phenomena involved and proposes a simple model. Formulate the hypotheses.
- C2N3 (chemistry): Characterizes the complexity of a system, identifies interactions and sources of uncertainty.
- C3N3 (chemistry): Communicates in a synthetic way in writing and orally to report and enhance the results.

Independent study

Objectifs : Prepare for practical work.

Méthodes : Reading documents on the intranet.
Questionnaire to be completed and included in the TP report.

Core texts**Assessment**

Score = 20% knowledge + 80% know-how. Knowledge score = preliminary test. Know-how score = 37.5% report + 62.5% handling and participation.