8 ECTS

Content

Classes*

- **Chemistry of solutions**
  General introduction to the chemistry of solutions and analysis: solutions, concentration and quantity, major volumetric assays, the measurement of the equivalence point
  Acid-base titration
    - In aqueous medium
    - In non-aqueous medium
  Titration by ligand exchange
  Titration by sparingly soluble compound
  Redox titration
  Non aqueous media, phase transfer

- **Separation methods**
  Aims of the analysis (identification, profiling, limit test, assay) - Selection of separation methods depending on the structure of the compounds to identify
  Fundamental values in separation methods
  Principle of different modes of separation methods
  Instrumentation and applications in pharmaceutical analysis

- **Spectral methods**
  Principle, instrumentation and application domain of electronic and vibrational spectrometries
  Principle and fields of application of mass spectrometry and spectrometry by nuclear magnetic resonance

Tutorials*

- Chemistry of solutions
- Separation methods
- Spectral methods

Practical works*

- Chemistry of solutions
- Separation methods
- Spectral methods

* Classes (all students in amphitheater), Tutorials (small groups of students), Practical works (smaller groups of students in order to study in adapted practical rooms/laboratories).

Assessment

Final exam about classes and tutorials.
Continuous assessment for the practical works with report writings, oral presentations and/or lectures.
Attendance to practical works needs to be approved.

Contact

Pierre Chaminade