

212039 – ADVANCED ANALYTICAL CHEMISTRY

CREDITS: 04 (four) – 60 hours/class

CONTENT:

Main statistical parameters used in analytical chemistry. Construction of titration curves and study of the chemical equilibrium involved in each kind of titration (acid-base, precipitation, complexation and oxidation-reduction). Sample preparation methods for organic and inorganic matrices.

SYLLABUS:

1. Statistics applied to analytical chemistry (introduction, basic concepts and sampling).
2. Acid-base equilibrium and titrations.
3. Precipitation equilibrium and titrations.
4. Complexation equilibrium and titrations.
5. Oxidation-reduction equilibrium and titrations.
6. Samples preparation (introduction and procedures to inorganic and organic determinations).

BIBLIOGRAPHY:

1. SKOOG, Douglas A.; WEST, Donald M.; HOLLER, F. James. Fundamentos de Química Analítica. Thomson, 2005.
2. HARRIS, Daniel C. Análise Química Quantitativa. 7.ed. LTC, 2008.
3. MENDHAM, J. et al. Vogel: análise química quantitativa. 6.ed. LTC, 2011.