



# Faculté d'ingénierie biologique, agronomique et environnementale

## AGRO

### BIR1312 Introduction à la chimie analytique

[30h] 2.5 credits

This course is taught in the 1st semester

**Teacher(s):** Joseph Dufey, Yves Dufrêne  
**Language:** french  
**Level:** 1st cycle course

#### Aims

Knowledge:

Global view on the chemical methods of analysis.

Fundamental aspects related to these methods: properties of solutions, chemical reactions, spectroscopy, interface phenomena.

Know-how:

Intelligent approach of the chemical analysis: methods (completions, performances), equipment (from principle to performances), role of the operator (setting, protocol, performances.)

#### Main themes

Introduction

Aqueous solutions: concepts and applications

Properties of precipitates, including the properties of charged surfaces

Oxydo-reduction reactions

Potentiometric methods and membrane properties

Spectrometric methods

Chromatographic methods; link with the phenomena of shared adsorption phases

Chemical analysis and information: standardization and performances.

#### Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Precursory courses : CHIM 1151 'Chimie générale: 1e partie'; CHIM 1251 'Chimie générale: 2e partie'

Evaluation : Written examination with problem solving.

Support : Book extracts and lecture notes.

#### Other credits in programs

<b>BIR21/A</b>	Première année du programme conduisant au grade de bio-ingénieur (Agronomie)	(2.5 credits)	Mandatory
<b>BIR21/E</b>	Première année du programme conduisant au grade de bio-ingénieur (Environnement)	(2.5 credits)	Mandatory
<b>INCH21</b>	Première année du programme conduisant au grade d'ingénieur civil chimiste	(2.5 credits)	Mandatory