

Faculty of Biological, Agronomic and Environmental Engineering

BIRC2101 Analyse biochimique

[15h+22.5h exercises] 3 credits

This course is taught in the 1st semester

Teacher(s): François Chaumont, Pierre Morsomme
Language: French
Level: Second cycle

Aims

This course will illustrate the principles of the basic techniques used in practical biochemistry and will provide to the students the opportunity to perform experiments in practical courses.

Main themes

The course will illustrate the basic and most widely used biochemical techniques allowing DNA and protein purification, identification and their biochemical properties. Practical courses are organized to illustrate these techniques.

Content and teaching methods

Chapters :

- 1) Centrifugation and subcellular fractionation
- 2) Chromatography
- 3) 1D and 2D electrophoresis
- 4) Membrane protein purification
- 5) Microscopic techniques
- 6) Protein identification by Edman sequencing and mass spectrometry
- 7) Immunological techniques
- 8) DNA sequencing
- 9) Genotype identification based on DNA probes and PCR techniques

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

Basic Biochemistry course is required

Other credits in programs

BIR22/0C	Deuxième année du programme conduisant au grade de bio-ingénieur: chimie et bio-industries (Technologies & gestion de l'information)	(3 credits)	Mandatory
BIR22/1C	Deuxième année du programme conduisant au grade de bio-ingénieur: Chimie et bio-industries (Sciences, technologie & qualité des aliments)	(3 credits)	Mandatory
BIR22/2C	Deuxième année du programme conduisant au grade de bio-ingénieur : Chimie et bio-industries (Ingénierie biomoléculaire et cellulaire)	(3 credits)	Mandatory
BIR22/3C	Deuxième année du programme conduisant au grade de bio-ingénieur : Chimie et bioindustries (Nanobiotechnologies, matériaux et catalyse)	(3 credits)	Mandatory
BIR22/4C	Deuxième année du programme conduisant au grade de bio-ingénieur : Chimie et bio-industries (Technologies environnementales: eau, sol, air)	(3 credits)	Mandatory