
# CHIM2230 Metabolic biochemistry

[30h] 3 credits

**Teacher(s):** Robert Crichton
Language: French
Level: Second cycle

## Main themes

Introduction, classification of enzymatic reactions, intermediary metabolism. Coenzymes: NAD+, NADP+, FMN, FAD, lipoamide, thiamine pyrophosphate, biotine pyrodoxal phosphate, tetrahydrofolate ; Bioenergetics : importance of ATP hydrolysis and other metabolites rich in energy - glycolysis - homolactic and alcoholic fermentations ; degradation of mono- and disaccharides ; pyruvate decarboxylase and its reaction mechanism - the citrate cycle ; components of the cycle serving as material to several biosynthetic reactions ; the anaplerotic reactions - pyruvate carboxylase and the glyoxylate cycle -oxidative phosphorylation - glycogen metabolism, gluconeogenesis and pentose phosphates reactions - Metabolism of fatty acids - Catabolism of amino acids and urea cycle - Photosynthesis - Biosynthesis and membrane lipid transports and formation of sterols - Biosynthesis of amino acids and connected molecules - Biosynthesis of nucleotides.

## Other credits in programs

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| **CHIM21** | Première licence en sciences chimiques | Mandatory |