# Microbial and enzymatic catalysis

| Niveau d'étude | ECTS | Composante | Période de l'année |
|---|---|---|---|
| **Bac +4** | **5 crédits** | **Sciences Fondamentales et Appliquées** | **Semestre 7** |

## En bref

# **Langue(s) d'enseignement:** Anglais
# **Organisation de l'enseignement:** Formation initiale
# **Ouvert aux étudiants en échange:** Oui
# **Référentiel ERASMUS:** Chimie

# Présentation

## Description

**Introduction to Microorganisms and Enzymes.**

**Enzymes structure and catalysis**: amino-acids, proteins, active sites, substrate specificity. Models for enzymatic reaction, enzyme activities.

**Enzymatic thermodynamics and kinetics.**

**Potentialities of microorganisms**, manipulation of their products, among them enzymes, for industrial applications.

**Advantages of immobilization techniques** for optimizing production of different products in a wide range of industrial applications.

**Denaturation, stability, activation and inhibition of enzymes.**

Use of enzymes in less conventional catalytic systems. Examples of biocatalysis in organic solvents.

**Available commercial enzymes,** purity, activity and different ranges of temperatures and pH.

## Objectifs

Expertise in biocatalysis

## Heures d'enseignement

| | | |
|---|---|---|
| CM | CM | 15h |
| TD | TD | 25h |

## Pré-requis obligatoires

Bachelor degree in chemistry or equivalent

## Programme détaillé

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