

Nanomedicine



En bref

- **Langue(s) d'enseignement:** Anglais
- **Forme d'enseignement :** Cours TD
- **Ouvert aux étudiants en échange:** Non

Présentation

DESCRIPTION

This course will delve into the dynamic field of nanomedicine and nano-biotechnology, where nanotechnology intersects with medicine. Students will explore the design, development, and implementation of nanoscale materials and devices for diagnosing, treating, and monitoring diseases. From targeted drug delivery to personalized medicine, this course will provide a comprehensive understanding of the latest advances in nanomedicine and nano-biotechnology. It will enable students to grasp the interdisciplinary nature of this field and its transformative potential in healthcare. Additionally, ethical and regulatory considerations relevant to the transfer of nanomedicine from the bench to the bedside will be addressed, preparing students to navigate the complexities of bringing nanotechnology-based medical innovations to the market.

Content:

Diagnosis and drug release

- Nanomedicine and nano-biotechnology – introduction (biodistribution, clearance)
- Chemical nature of nanoparticles
- Targeting and different routes of internalization
- Stimuli-responsive nanocarriers for drug release
- Diagnosis, treatment and monitoring of diseases

Therapy: from in vitro to clinical

- Interactions between nanoparticles and cells
- Thermal therapies: hyperthermia and photothermia
- Synergistic approach and personalized medicine

HEURES D'ENSEIGNEMENT

Nanomedicine	Cours Magistral	16h
Nanomedicine	Travaux Dirigés	4h

PRÉ-REQUIS NÉCESSAIRES

Basic notions of molecular and material chemistry and biology.

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LIEU(X)

➤ Campus des Grands Moulins

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