



INGÉNIERIE POUR LA SANTÉ

HEALTH ENGINEERING

Lecturers: **Emmanuelle LAURENCEAU, Romain RIEGER**

| Lecturers : 20 | TC : 0.0 | PW : 0.0 | Autonomy : 4 | Study : 8.0 | Project : 0.0 | Language : FR

Objectives

The aging of the population and the great advances in biology in recent years are opening up new avenues in terms of care and responses to societal expectations. In these advances, engineering problems take an increasingly important place (Development of diagnostic devices, production of drugs, miniaturization of devices, Biomaterials, Tissue engineering). The objective of the course is to show the potentiality of approaches coupling engineering and biology.

Keywords : Nanobiotechnology, biomaterials, biomechanics, sensors

Programme

- Biotechnologies for health and molecular diagnostics
- Imaging and drug delivery
- The challenges of orthopedics and biomaterials
- Cellular activity and bone adaptation

Learning outcomes

- - Know the different technologies - Understand the different fields of engineering for health - Analyze scientific documents - Summarize information and present results

Independent study

- Objectifs :**
- Group work of 3-4 students on a mini-project relating to one of the topics covered in class

- Méthodes :**
- Document research and analysis, report writing, preparation of the oral presentation

Core texts

Assessment

Knowledge = 100% oral presentation
Know-how = 100% written report
Final mark= 50% knowledge + 50% know-how