

**LECTURES**  
**«PHYSICS, MATHEMATICS»**  
Anglophone Students of the 1 Course  
**Specialty «GENERAL MEDICINE»**  
1 term of 2024/2025

- 1 Mechanical properties of biological tissues
- 2 Physical issues of hemodynamics
- 3 Mechanical oscillations and waves. Doppler effect. Sound. Ultrasound. Infrasound. Applications in Medicine
- 4 Biomechanics. Fundamentals of statics. Forces. Levers
- 5 Passive electric properties of biological tissues
- 6 Electric current (DC and AC). Effects of electric current and electromagnetic fields on biological tissues. Physical fundamentals of Electro-physiotherapy
- 7 Biological and Artificial membranes. Biopotentials
- 8 Active electrical properties of biological tissues. Physical fundamentals of Electrocardiography and Electroencephalography
- 9 Electromagnetic waves. Wave properties of light. Optical Coherence Tomography

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