

ADMISSIONS EXAM
CONTENTS OF PHYSICS

SCHOOL OF MEDICINE
UNIVERSIDAD DE NAVARRA



Universidad
de Navarra

1. BASIC TOOLS IN PHYSICS

- Trigonometry and simple geometric relationships between angles and lines.
- Vectors: scalar and vector product.
- Differentiation and integration (basic).
- Units of the International System.

2. MOVEMENTS AND FORCES

- Reference systems. Velocity and acceleration.
- Straight-line and circular movement.
- Newton's laws.
- Conservation of the amount of movement.
- Gravitational forces, forces of friction due to displacement.
- Hooke's law.

3. ENERGY, WORK AND HEAT

- Work. Kinetic energy. Gravitational potential energy.
- Conservation of energy.
- Power.
- Energy and heat. Principles of thermodynamics.

4. ELECTRICITY AND MAGNETISM

- Coulomb's law.
- The field, potential energy and electrical potential and the relationships between them.
- Equipotential surfaces.
- Relationship between electricity and magnetism.
- Lorentz force law.

5. WAVES AND OPTICS

- Simply harmonic oscillatory movement.
- Magnitudes and characteristics of waves.
- Reflection and refraction.
- Standing waves.