

PHYSICS ENTRANCE EXAM SYLLABUS

SCHOOL OF MEDICINE

UNIVERSITY OF NAVARRA

1. BASIC TOOLS IN PHYSICS

Trigonometry and simple geometric relationships between angles and straight lines.

Vectors: scalar and vector product.

The relation between integration and differentiation (basic).

Units of the International System.

2. MOVEMENTS AND FORCES

Reference systems. Velocity and acceleration.

Rectilinear and circular motion.

Newton's laws.

Conservation of momentum.

Gravitational forces, friction force as a function of displacement.

Hooke's Law.

3. ENERGY, WORK AND HEAT

Work. Kinetic energy, gravitational potential.

Conservative forces. Gravitational potential energy.

Energy conservation.

Power.

Energy and heat. Principles of thermodynamics.

4. ELECTRICITY AND MAGNETISM

Coulomb's Law.

Electric field, electric potential and potential energy and relationships between them.

Equipotential surfaces.

Relationship between electricity and magnetism.

Lorentz's Law.

5. WAVES AND OPTICS

Simple harmonic vibratory motion.

Magnitudes and characteristics of waves.

Reflection and refraction.

Standing waves.