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# PHYSICS STUDY PLAN

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## FIRST YEAR 60 ECTS

### Annual

- Differential and Integrated Calculus I (12 ECTS)
- General Physics (12 ECTS)
- **Linear Algebra and Geometry (EFC) (12 ECTS)**

### 1<sup>st</sup> semester (Sep-Jan)

- Chemistry I (6 ECTS)
- Introduction to Computation (6 ECTS)

### 2<sup>nd</sup> semester (Jan-Jun)

- Experimental Techniques I (6 ECTS)
  - Chemistry II (6 ECTS)
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## SECOND YEAR 60 ECTS

### Annual

- Vectorial and Complex Analysis (9 ECTS)
- Mechanics and Waves (15 ECTS)
- **Mathematical Methods (ENG) (12 ECTS)**

### 1<sup>st</sup> semester (Sep-Jan)

- Electromagnetism I (EFC) (6 ECTS)
- Electronics (6 ECTS)

### 2<sup>nd</sup> semester (Jan-Jun)

- Experimental Techniques II (ENG) (6 ECTS)
  - Modern Physics (6 ECTS)
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## THIRD YEAR 60 ECTS

### Annual

- Computational Methods (9 ECTS)
- Experimental Techniques III
- Quantum Physics (12 ECTS)
- Thermodynamics and Statistical Physics (EFC) (12 ECTS)

### 1<sup>st</sup> semester (Sep-Jan)

- Electromagnetism II (6 ECTS)
- Optics (EFC) (6 ECTS)

#### Optional courses 3<sup>rd</sup> and 4<sup>th</sup> years

- **Sensors and Drive Systems (EFC) (6 ECTS)**
- Signals and Systems (6 ECTS)
- Scientific and Technical writing skills in Basque (6 ECTS)

### 2<sup>nd</sup> semester (Jan-Jun)

#### Optional courses 3<sup>rd</sup> and 4<sup>th</sup> years

- Astrophysics (EFC) (6 ECTS)
  - Gravity and Cosmology (EFC) (6 ECTS)
  - Instrumentation I (6 ECTS)
  - Physics of Continuous Media (6 ECTS)
  - Scientific and Technical oral skills in Basque (6 ECTS)
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## FOURTH YEAR 60 ECTS

### 1<sup>st</sup> semester (Sep-Jan)

- Solid State Physics I (6 ECTS)

#### Optional courses

- Electrodynamics (EFC) (6 ECTS)
- Quantum Mechanics (EFC) (6 ECTS)
- Structural Properties of Solids (ENG) (6 ECTS)

### 2<sup>nd</sup> semester (Jan-Jun)

- Nuclear and Particle Physics (EFC) (6 ECTS)

#### Optional courses

- Analogic Electronics (6 ECTS)
  - Automatic Control I (6 ECTS)
  - Experimental Techniques IV (6 ECTS)
  - Solid State Physics II (EFC) (6 ECTS)
  - Themes of Physics (EFC) (6 ECTS)
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## FINAL YEAR PROJECT (ENG) (12 ECTS)

ENG: Courses taught in English

EFC: English Friendly Courses, taught in Spanish or in Basque, but support, tutorials and student reporting and exams in English.

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