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Universidad  
del País Vasco

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KIMIKA  
FAKULTATEA  
FACULTAD  
DE QUÍMICA

# MASTER IN NANOSCIENCE

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## INTRODUCTION & OBJECTIVES

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Department of Polymers and Advanced Materials: Physics, Chemistry and Technology of the University of the Basque Country and the Center of Materials Physics, in collaboration with Donostia International Physics Center and CIC nanoGUNE in Donostia-San Sebastián (Spain), offer a postgraduate program in Nanoscience. Participants will complete an individualized one-year program with 60 credits (ECTS) to be granted a Master's degree in Nanoscience (MSc). Research with internationally renowned teams, direct contact with senior researchers and the possibility of further study (PhD work) is offered as an integral part of the program.

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## CAREER OPPORTUNITIES

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The Master in Nanoscience is research oriented and provides direct access to PhD studies, such as the PhD program in Physics of Materials.

Graduate students would obtain a high quality CV to apply for applied research jobs in Technological Centers.

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## ABOUT THE COURSE

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<b>Teaching place:</b>	CFM- Materials Physics Center (San Sebastian).
<b>Teaching type:</b>	On-site.
<b>Teaching language:</b>	English.
<b>Approximate fees:</b>	2.150-2.350 €.
<b>Calendar:</b>	October-July.

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## ENTRY PROFILE

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The Master's Degree in Nanoscience is especially recommended for Physics undergraduates or graduates wishing to further themselves in areas related to Nanoscience and Materials. Students with other profiles will be referred to basic training courses at the start of the course, in order to supplement certain aspects of their education.

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## TEACHING LOAD

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<u>Compulsory subject courses</u> 24 Credits ECTS	<u>Optional subject courses</u> 21 Credits ECTS	<u>Research Projects</u> 15 Credits ECTS	<u>Total</u> 60 Credits ECTS
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## TRAINING SYLLABUS

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### COMPULSORY COURSES

Experimentals Techniques I: Structural Characterization.  
Experimentals Techniques II: Spectroscopies.  
From Nanoscience to Nanotechnology.  
Fundamentals of Nanoscale Characterization.  
Low Dimensional Systems and Nanostructures.  
Modelling and Molecular Dynamics Simulations at the Nanoscale.  
Nanostructural Properties.  
Soft Matter and Nanostructures Materials.

### OPTIONAL COURSES

Advanced nano-scale characterization techniques.  
Advanced theoretical methods in nanoscience.  
Advanced topics in nanomaterials.  
Classical Electrodynamics.  
Fundamentals of Quantum Mechanics.  
Introduction to Material Science.  
Introduction to scientific research.  
Mathematical Methods for Nanoscience.  
Nanoscience: A Historical Perspective.  
Nanotechnology-Oriented Research Activities.

### FINAL MASTER'S DISSERTATION

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## CONTACT

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## PARTNER WITH A COOPERATION AGREEMENT

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