

**Project Fiche**

Summer Scientific Campus Programme

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**VLC/CAMPUS**  
VALENCIA, INTERNATIONAL CAMPUS OF EXCELLENCE



Summary of the project											
Project	Summer Scientific Campus										
Field	Scientific improvement										
Programme	Scientific Dissemination VLC/CAMPUS										
Target group	4th course of Compulsory Secondary Education or 1st course of Upper Secondary School Education of the scientific area in Spanish teaching centres										
Call	Annual										
Responsible	OPEX Office of Projects for Excellence										
Start	It begins in 2010 with successive editions in 2011, 2012 and 2013										
End											
State	In progress										
Budget											
Links of interest	<a href="http://www.campuscientificos.es">http://www.campuscientificos.es</a> <a href="http://www.fecyt.es">http://www.fecyt.es</a>										
	<p>The Summer Scientific Campus Programme is part of the activities developed by VLC / CAMPUS Valencia, International Campus of Excellence. It is promoted by the Spanish Foundation for Science and Technology (FECYT) in collaboration with Obra Social "la Caixa", organised together with the promoting CEI universities. The programme jointly develops activities in the facilities provided by VLC CAMPUS in Burjassot Campus, Tarongers Campus, Blasco Ibañez Campus and Vera Campus. Summer Scientific Campus contains four scientific immersion projects, approved by FECYT:</p> <table border="1"> <thead> <tr> <th>Project name</th> <th>Subject</th> </tr> </thead> <tbody> <tr> <td><i>Un viaje fantástico con los pies en la Física</i> (A wonderful trip with feet in Physics)</td> <td>Physics</td> </tr> <tr> <td><i>La Química: Una fuente inagotable de soluciones para la salud y el bienestar</i> (Chemistry: an infinite source of solutions for health and welfare)</td> <td>Chemistry</td> </tr> <tr> <td><i>Matemáticas, criptografía y códigos: Cómo usar las Matemáticas para entendernos</i> (Mathematics, Cryptography and codes: How to use Mathematics to understand us)</td> <td>Mathematics</td> </tr> <tr> <td><i>Tecnología y Física Médicas: La innovación al servicio de la medicina</i> (Medical Technology and Physics: Innovation at the service of medicine)</td> <td>Medical Physics</td> </tr> </tbody> </table>	Project name	Subject	<i>Un viaje fantástico con los pies en la Física</i> (A wonderful trip with feet in Physics)	Physics	<i>La Química: Una fuente inagotable de soluciones para la salud y el bienestar</i> (Chemistry: an infinite source of solutions for health and welfare)	Chemistry	<i>Matemáticas, criptografía y códigos: Cómo usar las Matemáticas para entendernos</i> (Mathematics, Cryptography and codes: How to use Mathematics to understand us)	Mathematics	<i>Tecnología y Física Médicas: La innovación al servicio de la medicina</i> (Medical Technology and Physics: Innovation at the service of medicine)	Medical Physics
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Description	<p><b><i>Un viaje fantástico con los pies en la Física</i></b> A tour through phenomena and experiments of Physics is developed in this project, from an approach that stresses its fascinating nature, importance and relevance and favouring experimentation and quantification performed by the students, providing explanations adapted to their academic level and encouraging relationships with other sciences and with the technology around us. This project presents the opportunity to observe and perform a selected set of experiments and demonstrations in a journey that, besides being attractive, enables the understanding of basic physical concepts with the help of explanations prepared in the line with the training of participants. Students have personally conducted a whole series of experiments, focusing on both qualitative and quantitative aspects involved, using assembly, instrumentation and teaching materials prepared for their educational level. The goal achieved is that students have discovered how interesting and surprising the physical world is and they have established relationships with the basic concepts of Physics, while enjoying an experimental work which they have developed in the context of areas of great interest, highly topical and with countless technological applications, which have always been highlighted throughout the sessions.</p> <p><b><i>La Química: Una fuente inagotable de soluciones para la salud y el bienestar.</i></b> The main goal of the project is to familiarize students with the work that develops a chemist in a laboratory by performing small experiences allowing them, in addition, to become aware of the fundamental role of this discipline in maintaining and improving our quality of life. Throughout the different experimental sessions, students have had a first contact with a range of operations and techniques specific of a chemical laboratory. They have exercised the scientific method (proposing hypotheses, carrying out a little research and analysing the results), and have presented the results correctly and have been sensitised to the great importance of Chemistry in the field of health and wellness.</p>										

Summary of the project	
	<p><b>Matemáticas, criptografía y códigos: Cómo usar las Matemáticas para entendernos</b></p> <p>Aim: To make the project become a theoretical and practical scheme so with mathematical concepts apparently very abstracts, a practical framework can be established towards encryption and decryption concepts.</p> <p>Description: Construction of scytales, Caesar wheels and generation of PGP Keys... The material is rather the response to the completed activities. A "physical" material has not always been used so it has been made much use of websites. We have used the programme Scilab, available in <a href="http://www.scilab.org">http://www.scilab.org</a> ,and GAP4, available in <a href="http://www.gap-system.org">http://www.gap-system.org</a> . , to show the difficulty of integer's factorization.</p> <p><b>Tecnología y Física Médicas: La innovación al servicio de la medicina</b></p> <p>This project has been made based on the achievement of objectives such as bringing the research activity developed at the university to young people, promoting their interest in science, technology and innovation, showing applications of physics and technology in the field of health as well as the tools and technologies applied in systems for medical imaging and radiotherapy and the imaging techniques for medical diagnosis and subsequent radiotherapy treatment.</p> <p>This project also includes laboratory experimentation, promotion of scientific research, teamwork and technology transfer.</p>
Aims	<p>Summer Scientific Campus aims to promote scientific vocations among young people. For that, this course gives participants the opportunity to direct contact with daily work of researchers at a university and multicultural environment that will help them to define their future plan of studies. In addition, the participants can enjoy of complementary scientific, cultural and leisure activities.</p>
Results	