


Instituto Politécnico de Bragança

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Type of organisation:

SME School University Public Authority
 Training No Profit NGO

Other (Specify)

Fields of action :

SMEs Youth Universities Public Authorities
 Equal opportunities Schools Unemployed

Description of the organisation

The Polytechnic Institute of Bragança (IPB) is a higher education public institution with a defined mission in creating, transmitting and diffusing technical-scientific and professional knowledge through the articulation of study, teaching, applied research and experimental development. IPB belongs to the European Network for Universities of Applied Sciences (UASNET), which main objectives include the transferability of professional skills and the integration of applied research in their professional and technological education mission.

Founded in 1983, IPB is presently composed by five schools, 400 teachers and more than 7000 students. Its activities embraces a wide area of knowledge and technology, namely, arts, communication and multimedia, business sciences and law, education and teachers training, agriculture sciences and natural resources, health, tourism, sports, technologies and engineering.

IPB has an internationalization programme with widely recognized success, including the annual mobility of more than 700 incoming and outgoing students and 200 teaching staff members, as the result of the collaboration with several European HEIs and with universities from the Community of Portuguese-Speaking Countries and all over the World. In the recent years, IPB has consolidated its international mobility under the Lifelong Learning Programme by renewing its European Charter for the period 2007/2013 and extending the programme of student mobility to placements. We have students from all over the country and the world and as such has a very strong emphasis on a multicultural environment, due to the 11% of international students.

In 2011, IPB awarded the ECTS Label by the European Commission, acknowledging the quality of the information provided in terms of the degree programmes offered (www.ipb.pt/ectsguide) and the management of student mobility within the European Higher Education Area (www.ipb.pt/iro). In 2013, the IPB was awarded the Diploma Supplement Label by the European Commission for the period 2013-2018. This label recognizes the quality of the diploma supplement, the transparency of procedures, and its importance in the facilitation of mobility and employability of the recent graduates, as well as the academic and professional recognition of the qualifications. Thus, the IPB is one of the few national and international institutions that have been distinguished by the European Commission with two quality labels.

IPB is a certified institution awarded with ISO 2001:2008 standards certificate, our Planning and Quality Management Office implements mechanisms of quality control in order to improve quality of services and follow financial implementation of projects.

Experience of the organization in previous European projects

Projects running in the last 5 years period:

- Erasmus+ Strategic Partnership – “INNOCHEM: Improvement of Innovative Teaching Methods in the Fields of Technology and Chemical Engineering According to the Best Standards of the Bologna Process” (2014-2017).
- Erasmus+ Strategic Partnership – “EXPEDUCOM: Experiential Education Competence” (2014-2017).
- Erasmus+ Strategic Partnership – “BEST: Business Education for Sustainability - Teaching Corporate Social Responsibility and Social Entrepreneurship for Sustainable Local and Regional Development” (2014-2017).
- LLP Programme Erasmus Intensive Programme – “Management of agroforestry systems: ecological, social and economic approaches” (2013-2014).
- LLP Programme Erasmus Intensive Programme – “Methods in Food Mycology and Mycotoxicology” (2013-2014).
- LLP Programme Erasmus Intensive Programme – “Robotics systems education for European students Intensive programme electronics and automation” (2012-2014).
- LLP Programme Erasmus Intensive Programme – “Entrepreneurship education for European students” (2011-2014).
- TEMPUS IV Programme – Joint Project – La MANCHE Leading and Managing Change in Higher Education (2012-2015) LLP Programme – Comenius Subprogramme – Multilateral Project: “INTACT Interactive Teaching Materials across Culture and Technology”(2012-2015).
- LLP Programme – Comenius Subprogramme – Multilateral Networks: “Chemistry Is All Around Network” (2011-2014).
- ERASMUS-MUNDUS External Cooperation Windows: “E2NHANCE: Educational Exchange Network for Higher Academia Gap Narrowing Between Central/South America and Europe” (2009-2013).
- LLP Programme – Thematic Network: DIETS 2 – Dieticians Improving the Education and Training Standards (2010-2013).

Experience and Expertise of the organization in the project's subject area

IPB was actively involved in several projects/initiatives concerning science education devoted to students of different levels and general public. Some examples are the science communication in math was the project CV/PEC/268, "Games Laboratory", financed by Agência Ciência Viva (Lisbon, Portugal), developed during the period 2013-2015. This project initially involved IPB and two secondary schools but the outcome reached more than 2000 students and teachers. Other math project also financed by Agência Ciência Viva was the project CV/VI/ID355 "Eureka – Mathematical Games" developed during the period 2006-2008, that involved fifteen secondary schools of Portugal. Moreover, IPB has promoted the local implementation of several initiatives devoted to secondary school students such as "Open Science Day" (IPB, 2009-2018), "Hands on Particle Physics Masterclasses" (International Particle Physics Outreach Group, 2010-2018) and "Verão Ciência no IPB" (Agência Ciência Viva, 2009-2011).

More recently IPB was involved in the LLP projects CIAA Net - Chemistry is All Around Network (518300-LLP-2011-IT-COMENIUS-CNW), INTACT –Interactive teaching materials across culture and technology (527932-LLP-2012-DE-COMENIUS-CMP) and the Strategic Partnerships E-Learning from Nature with objective to promote science among secondary students (2015-2017) and INNOCHEM - Improvement of innovative teaching methods in the fields of Technology and Chemical Engineering according to the best standards of the Bologna Process (2014-1-PL01-KA203-003415) (this one in course).

Contributions that can be provided to the project

Considering the background knowledge and past experience IPB is able to support the programmed project activities and contribute to the main expected results all intellect output. IPB is also the scientific coordinator of the project MathE - Improve Math silks in higher Education.

Reasons of involvement in the project

MathE - Improve Math Skills in Higher Education project concentrates on the promotion of the acquisition of Math skills using ICT tools for students and lecturers and other target groups. The need to support and encourage lecturers in using learning technologies in an advanced way in their teaching and to increase digital media literacy is proven. The innovative idea of MathE is the offer, as output, of structured access to a variety of TEL-methods and TEL-resources in such a way that teachers can effectively find different TEL models, solutions, pedagogical theories and best practice in their classroom. The development of an e-resourcekit, where scientific concepts are integrated and validated by lecturers and researchers, will represent a considerable step in mathematics teaching / learning. IPB is strongly committed to the effective implementation and dissemination of educational tools to improve student's motivation in math and support teacher's training.

Contact Person's Experience and Expertise

Ana I. Pereira: Coordinator Professor at the Department of Mathematics, Polytechnic Institute of Bragança, and she is a member of the Research Centre in Digitalization and Intelligent Robotics (CeDRI) - Polytechnic Institute of Bragança - and Algorithm Research Centre – Minho University. She also is Direction Member of Braganza "Ciência Viva" Science Centre. She got her PhD at Minho University (2006) in 'Numerical Optimization' area. She is author or co-author of more than sixty journal papers, book chapters and conference proceedings. She participates in more than ten research projects in the areas of robotics, optimization and innovate tools in teaching. In particular she was the IPB coordinator of the following projects: Strategic Partnerships "E-Learning from Nature" with objective to promote science among secondary students (2015-2017), "Games Laboratory", financed by Agência Ciência Viva (2013-2015), "Braganza@Science", financed by Agência Ciência Viva (2013-2016) and "Eureka – Mathematical Games" also financed by Agência Ciência Viva (2006-2008).

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Florbela Fernandes: Associated Professor at Instituto Politécnico de Bragança and she is a member of the Research Centre in Digitalization and Intelligent Robotics (CeDRI). She obtained her PhD in Mathematics

by University of Minho. Her major research is on Optimization area and in the science communication in the Mathematics area. In this way, she collaborated in some financed projects, for example: Eureka – Mathematical Games (www.eurekit.ipb.pt), Games Laboratory, Braganza@Science and E-learning from nature (enature.pixel-online.org) .