

## 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

Other (Specify)

### **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 presently the most qualified academic staff of the Portuguese polytechnic system and is the Portuguese Higher Education institution with the greatest normalized impact, the best excellence rate and the best excellence with leadership, according to the Iberoamerican 2014 ranking, developed by the SCImago Research Group.

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. 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](http://www.ipb.pt/ectsguide)) and the management of student mobility within the European Higher Education Area ([www.ipb.pt/iro](http://www.ipb.pt/iro)).

In 2013, the IPB was awarded the Diploma Supplement Label by the European Commission for the period 2013-2016. 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.

### **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**

Additionally to the EU initiatives previously described, IPB was actively involved in several projects/initiatives concerning science education devoted to students of different levels and general public. Some examples include, the science communication projects "Laboratório de Polímeros - Polymers Laboratory", "Laboratório de Jogos - Games Laboratory" and the project Ciência@Bragança (<http://www.cienciabraganca.pt/>) financed by Agência Ciência Viva (Lisbon, Portugal). These projects have involved IPB and schools of different teaching levels. Moreover, and since several years, IPB has promoted the local implementation of various initiatives devoted to secondary school students such as "Chemistry Olympics" (Sociedade Portuguesa de Química), "Hands on Particle Physics Masterclasses" (International Particle Physics Outreach Group) and "Verão Ciência no IPB" (Agência Ciência Viva). During the 2011 International Year for Chemistry, numerous IPB researchers have also participated in collaboration with Centro Ciência Viva in Bragança in three events open to the general public: "Days with Chemistry", "Researchers' Night" and "Night of Chemistry".

### **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: (i) ICT based collection of Research Action tools; (ii) Collection of students' video lessons and (iii) Teachers' guide "Innovation in the teaching of scientific subjects".

### **Reasons of involvement in the project**

The science education needs highlighted in the "E-learning from nature" project are well recognized by IPB with a significant decrease in the number of students wishing to pursue science related careers. Moreover, following informal contacts with local secondary school teachers, where the need for technical consulting/support in several technological topics is frequently referred. IPB is strongly committed to the effective implementation and dissemination of educational tools to improve student's motivation for science related subjects and support teacher's training. Moreover, approach researchers to society taking advantage of the installed scientific and technological capacity is also an IPB key issue.

### **Contact Person's Experience and Expertise**

Filomena Barreiro: Filomena Barreiro has a graduation and PhD degrees in Chemical Engineering (FEUP). She is currently Coordinator Professor at the Bragança Polytechnic Institute (IPB, [www.ipb.pt](http://www.ipb.pt)) and member of the research staff of the Laboratory of Separation and Reaction Engineering (LSRE) (Researcher ID: L-9802-2014, SCOPUS ID: 23093315700 and ORCID ID: 0000-0002-6844-333X). Her main research interests are synthesis and characterization of polymeric materials with special emphasis to polymeric materials from renewable resources, development of water-based polyurethane systems and microencapsulation applied to different industrial fields. She has experience in educational projects and in science promotion with young students.

Ana I. Pereira: Ana I. Pereira has a graduation and PhD degrees in the area of Mathematics (University of Minho). She is currently Adjunct Professor at the Bragança Polytechnic Institute (IPB, [www.ipb.pt](http://www.ipb.pt)) and member of the research staff of the Algoritmi research Centre (<http://algoritmi.uminho.pt>) (Researcher ID: F-3168-2010, SCOPUS ID: 8638283800 and ORCID ID: 0000-0003-3803-2043). Her main research interests are optimization and mathematical models for industrial processes. She has experience in educational projects and in science promotion with young students.