INSTITUTO POLITÉCNICO DE BRAGANÇA

# BIP Blended Intensive Programmes

Polytechnic Institute of Bragança (IPB, Portugal)
2022/2023 – 2nd semester

BIP (Blended Intensive Programmes) coordinated by the Polytechnic Institute of Bragança (IPB, Portugal): Responsible, Location, E-mail contact, Partners, Calendar and Course Contents. The short-term physical mobility will be carried out at the Polytechnic Institute of Bragança, in Bragança or Mirandela, Portugal, excepting BIP in Smart Grids. The individual support to students and teaching staff for the physical mobility should be provided by the sending organisation, that can use their own regular Erasmus funds for mobility.

| **Challenge Based Innovation (6 ECTS credits)** |
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| **Responsible:** Pedro Rodrigues; **E-mail:** pedror@ipb.pt |
| **Location:** Bragança |
| **Partners:** Polytechnic Institute of Bragança (Portugal), Hanze University of Applied Sciences (The Netherlands), Bremen University of Applied Sciences (Germany), Universidad de La Laguna (Spain), Silesian University in Opava (Czechia), South East Technological University (Ireland) |
| **Calendar:** Virtual component starting 17/04/2023, ending 18/06/2023. Physical component starting 19/06/2023, ending 23/06/2023. |
| **Contents:** Team building. Analysis and study of the selected challenge. Teamwork. Discussion of ideas (brainstorming). Rapid prototyping and prototype evaluation (if applicable). Innovation. The value proposition for different stakeholders. Solution validation. Pitch/Selling. Creation of value proposition for the end user. |

| **Circular Bioeconomy (6 ECTS credits)** |
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| **Responsible:** Elsa Ramalhosa, Filomena Barreiro; **E-mail:** elsa@ipb.pt |
| **Location:** Bragança |
| **Partners:** Polytechnic Institute of Bragança (Portugal), Hanze University of Applied Sciences (The Netherlands), Bremen University of Applied Sciences (Germany), Universidad La Laguna, (Spain), University West (Sweden), Silesian University in Opava (Czechia), Cracow University of Technology (Poland) |
| **Calendar:** Virtual component starting 27/04/2023, ending 29/06/2023. Physical component starting 05/06/2023, ending 09/06/2023 |
| **Contents:** Seminars in Circular Bioeconomy: Circular economics, Degrowth economics, Bioeconomy, Biotechnology in bioeconomy, Sustainability of food businesses through quality, innovation and data analytics, Bioenergy, Life Cycle Analysis. Biomass in the synthesis of porous polymer materials. Research activities at the Mountain Research Centre (CIMO, Bragança, Portugal). Project development on sustainable development goals. |

| **Cybersecurity (6 ECTS credits)** |
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| **Responsible:** Tiago Pedrosa; E-mail: riftman@ipb.pt |
| **Location:** Bragança |
| **Partners:** Polytechnic Institute of Bragança (Portugal), Universidad de León (Spain), Bremen University of Applied Sciences (Germany) |
| **Calendar:** Virtual component starting 11/04/2023, ending 11/06/2023. Physical component starting 12/06/2023, ending 16/06/2023 |
| **Contents:** Fundamentals of system and network security. Concepts of cryptography. Vulnerabilities and attacks. Industrial Cybersecurity. Mechanisms for control, containment, detection and prevention. Systems and networks hardening. Security audit and penetration testing. |

| Emotional Education (6 ECTS credits) |
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| **Responsible:** Maria Augusta Branco, Ana Paula Monte, Leonel Deusdado; **E-mail:** aubra@ipb.pt |
| **Location:** Bragança |
| **Partners:** Polytechnic Institute of Bragança (Portugal), Universidad de La Laguna (Spain), University Croix Rouge de Limoges (France), Wroclaw Medical University (Poland), Universidad de Almeria (Spain), Management and Law College Ljubljana (Slovenia). |
| **Calendar:** Virtual component starting 11/04/2023, ending 09/06/2023. Physical component, starting 01/06/2023, ending 07/06/2023. |
| **Contents:** Emotional Intelligence (IE), Emotional Competence (EC), Emotional Education (EE): Concepts and neuro-differentiation. Emotion: Functions and Effects of Cognitive and Behavioral Processes. Emotion and Feeling: differences and expressions. EE for EC - Health Promotion/ EC Dimensions. Be emotionally competent as Educator, Manager, Entrepreneur. EE Laboratories I, II: Emotion Management Strategies. Education, Management, Social and Health Institutions: Controlled Internship experience: Practical Intervention plan (individual, family, group/community context). |

| Integrated Multimedia Project (5 ECTS credits) |
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| **Responsible:** Ana Lúcia Pinto, Carlos Casimiro Costa; **E-mail:** analucia.pinto@ipb.pt |
| **Location:** Mirandela |
| **Partners:** Polytechnic Institute of Bragança (Portugal), Stefan cel Mare University of Suceava (Romania), University of Silesia in Katowice (Poland), Hyperion University (Romania) |
| **Calendar:** Virtual component starting 27/02/2023, ending 29/04/2023. Physical component starting 02/05/2023 ending 06/05/2023 |
| **Contents:** At the end the students should be able to build a holistic vision on the development of multimedia projects in work context; manage research studies into the accomplishment a project in real context; plan and develop a project through design methodologies; master the full integrated multimedia product; apply systemic methodologies in professional context; plan and design a project according to specifications of actual scale; develop an integrated communication structure; work with multidisciplinary teams. Project BIP theme: local marketplaces media. |

| Local Public Policies (6 ECTS credits) |
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| **Responsible:** Cláudia Costa; **E-mail:** claudia@ipb.pt |
| **Location:** Mirandela |
| **Partners:** Polytechnic Institute of Bragança (Portugal), University of Malta (Malta), Complutense University of Madrid (Spain) |
| **Calendar:** Virtual component starting 23/02/2023, ending 08/05/2023. Physical component starting 09/05/2023 ending 13/05/2023. |
| **Contents:** *Seminars in Local Public Policy:* i) Local Government Activity and the Role of Public Policy; ii) Policymaking Process; iii) Impact and Evaluation of Public Policy; iv) Thematic issues of Local Public Policy (for example, local sustainable development, modernization and innovation). *Cocreation challenge design:* Analyze through challenge-based learning real-life problems of local governments. |

| Nature Conservation and Artificial Intelligence (6 ECTS credits) |
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| **Responsible:** João Azevedo, **E-mail:** jazevedo@ipb.pt |
| **Location:** Bragança |
| **Partners:** Polytechnic Institute of Bragança (Portugal), University of Valladolid (Spain), University of Molise (Italy) |
| **Calendar:** Virtual component starting 10/03/2023, ending 19/05/2023. Physical component starting 29/05/2023, ending 02/06/2023 |
| **Contents:** The programme provides students with basic knowledge on biodiversity conservation and artificial intelligence, covering: Introduction to conservation (history, context, concepts); Conservation strategies (areas, species and sustainable management); Principles and practices of conservation in (semi) natural and managed systems at landscape and site scales; Assessment of ecosystem services; Principles and applications of artificial intelligence; Application of artificial intelligence to conservation planning and monitoring. |

| **Smart Grids (6 ECTS credits)** |
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| **Responsible:** Ângela Ferreira; **E-mail:** apf@ipb.pt |
| **Location: La Laguna, Tenerife, at University of La Laguna** |
| **Partners:** Polytechnic Institute of Bragança (Portugal), University of La Laguna (Spain), Cracow University of Technology (Poland), University of Zilina (Slovakia), Hanze University of Applied Sciences (The Netherlands), Bremen University of Applied Sciences (Germany). |
| **Calendar:** Virtual component starting 27/02/2023, ending 09/06/2023. **Physical component at the University of La Laguna (Spain)** starting 12/06/2023, ending 16/06/2023. |
| **Contents:** Sustainable low-carbon technologies in power system. Digitalization and sensoring of electrical networks. Power Systems Analysis: main components, including FACTS devices, their functionalities and models; power flow solutions. Smart microgrids operation and control. Energy Communities initiatives and legal frameworks. Blockchain in the context of SmartGrids. |