

Course Unit: 1961006 – Information and Business Process Management

Year 1 Semester 1 ISCED Code: 0413 ECTS: 5

Type of Course Unit Compulsory Delivery Mode: Face-to-face / Distance Learning Language of Instruction: Portuguese

COURSE COORDINATOR: Carlos Manuel Lopes Borralho

HOURS OF WORK

TOTAL HOURS	Contact Hours								Hours in autonomous work
	Theory	Theory and practice	Practical and laboratory work	Field work	Seminar	Internship	Tutorial guidance	Other	
125		35							90

Prerequisites (if applicable):

LEARNING OUTCOMES (knowledge, skills and competence)

The course emphasizes the importance of proper structuring of workflows using Business Process Management and Business Process Modeling Notation – BPMN.

The students should be able to describe and ensure the critical aspects associated with the value and information management, and use BPMN and use of business intelligence tools (OLAP, Data Mining and Data Warehouses).

Targets:

- Characterize the importance of information in decision-making processes.
- Characterize the different levels of organizational architecture, as well as the levels of maturity in the use of ICT and in the construction of Information Systems.
- Perform multidimensional data analysis.
- Elaborate and explain BPMN process modeling.

CONTENTS

- 1 Information management:
 - 1.1 Data, information and science
 - 1.2 From information to information systems: fundamental concepts
 - 1.3 The value of information
 - 1.4 Levels of organizational architecture
- 2 Systems decision support:
 - 2.1 Anatomy of the decision-making process
 - 2.2 Multidimensional data analysis: OLAP tools
 - 2.3 Data Mining
- 3 Business Process Management:
 - 3.1 BPM concepts (Lean Production, Six Sigma, Reengineering, Total Quality Management and Workflow Systems)
 - 3.2 Fundamental principles of BPM

3.3 Process-oriented organizations

3.4 Organizational maturity and change management

3.5 Modeling of business processes, methods and tools: the use of BPMN

DEMONSTRATION OF THE CONTENTS COHERENCE WITH THE COURSE UNIT'S LEARNING OUTCOMES

The course emphasizes the importance of workflows, using Business Process Management and Business Process Modeling Notation - BPMN. Seeks to overcome the possible communication gap between the design and the effective implementation of processes and information and communication technologies - ICT.

TEACHING METHODOLOGIES

The curricular unit is presented on b-learning basis after the academic year 2023-2024. This teaching modality uses tools of face-to-face teaching in 2/3 of the training. Already during 1/3 of the training uses distance learning tools. The training has 6 sessions in distance education and the rest in face-to-face teaching.

In the face-to-face sessions, the interrogative, demonstrative and expository pedagogical methods will be used. As for pedagogical techniques, emphasis will be given to active approaches, particularly the use of simulated practice exercises, focused on the resolution of exercises and the pedagogical case study.

In the online sessions, the Model of Communities of Inquiry and Model of Interaction in Virtual Environments are assumed. Emphasis is placed on collaborative learning, the development of social and communication skills, and the development of active participation.

DEMONSTRATION OF THE COHERENCE BETWEEN THE TEACHING METHODOLOGIES AND THE LEARNING OUTCOMES

At the end students should be able to describe and ensure the critical aspects associated with the value and information management, design processes using BPMN and using business intelligence tools.

EVALUATION METHODS

The final evaluation, in first season, results from the application of the formula that considers 4 parameters, namely, 6 mini-tests and 6 participations in 6 forums, associated with each synchronous session taught in distance education regime, 1 group work and 1 individual test to be carried out in person, face to face. The calculation of the final grade is carried out as follows:

Final evaluation = $[3*(S1 + S2 + \dots + S5 + S6)/(6 * 20)] + [3*(F1+F2+ \dots +F5+F6)/(6 * 20)] + 4G+10T$

Where:

S1 to 6 = Mini tests, to be performed weekly, 1 for each synchronous session taught in distance learning, a total of 6.

F1 to 6 = Interventions in the forums, at least 1 per forum, for a total of 6.

G = Group work, according to the script below, in one of the 3 options allowed.

T = Individual test, to be performed in face-to-face format, always.

As an alternative to the assessment described, students can also opt for an appeal exam, supported by an individual face-to-face test and quoted at 100%.

MAIN BIBLIOGRAPHY

Borrvalho, Carlos (2019). Informação e Gestão de Processos de Negócio. Lisboa: Edições Sílabo.

Benedict, Tony, Kirchmer, Mathias e Scarsig, Marc (2021). BPM CBOK Version 4.0: Association of Business Process Management Professionals International- Portuguese Version. ABPMP.

Beynon-Davies, Paul (2020). Business Information Systems. 3rd Edition. Red Globe Press.

Fahland, D., Ghidini, C., Becker, J., Dumas, M. (Eds.) (2020). Business Process Management. 18th International Conference, BPM 2020, Seville, Spain, September 13–18, 2020, Proceedings.

Norma ISO/IEC 19510:2013 (Information technology - Object Management Group Business Process Model and Notation)

Osterwalder, A., & Pigneur, Y. (2010). Criar Modelos de Negócio. Dom Quixote.

Sítios: <http://www.bpmn.org/> e <http://www.abpmp-pt.org/>

Turban, Efraim, Delen, Dursun, Sharda, Ramesh e King, David (2017). Business Intelligence: A Managerial Approach. Pearson.