

Course Unit	Prospecting and Transfer of Technology		Field of study	Chemical and Biological Technologies	
Master in	Product and Process Innovation - Chemical and Biological Technologies		School	School of Technology and Management	
Academic Year	2023/2024	Year of study	1	Level	2-1
Type	Semestral	Semester	1	ECTS credits	10.0
Code	5057-682-1102-00-23				
Workload (hours)	270	Contact hours	T -	TP -	PL -
			TC -	S -	E -
			OT -	O	75

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s) Ana Isabel Pinheiro Nunes Pereira, José Alberto Cardoso Pereira, Paulo Jorge Pinto Leitão, Vera Alexandra Ferro Lebres

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:

1. To know the importance of the collection, systematization and dissemination of strategic information in the area of information, communication and electronics (ICE) technologies.
2. Be able to observe, capture, analyze and disseminate technological, scientific, economic, social and commercial info relevant to research, innovation and commercial activities in ICE technologies.
3. To know how to consult databases of patents and scientific publications and sources of information related to ICE technologies.
4. To know the methodologies of open innovation and technological prospectation in the ICE technologies area.
5. Elaborate and know the procedures of registration of intellectual property in ICE technologies.
6. Evaluate the business potential of technology applied to a given product/process.
7. To know the tools and services available in the market most suitable for prospecting and transfer of ICE technologies.

Prerequisites

Not applicable

Course contents

1. Methods and procedures for technology transfer in the ICE technologies area
2. Scientific and patent databases in the ICE technologies area
3. Open innovation methodologies and technological prospects in the ICE technologies area
4. Intellectual property and critical innovation policies in the ICE technologies area
5. Assessment of the technology potential in the business and in the ICE technologies state of the art

Course contents (extended version)

1. Methods and procedures for technology transfer in the ICE technologies area
 - Prospection and qualification techniques
 - Evaluation and marketing
 - Negotiation procedures
 - Problems of licensing and identification of potential licensing agreements
2. Scientific and patent databases in the ICE technologies area
 - Types of scientific and patent databases
 - Legislation
 - Royalties and their variants
3. Open innovation methodologies and technological prospects in the ICE technologies area
4. Intellectual property and critical innovation policies in the ICE technologies area
 - Intellectual Property Rights
 - Innovation policy challenges: legislation, financing, tax incentives and socio-economic impact
 - Integration with higher education institutions and research centers in the ICE technologies area
5. Assessment of the technology potential in the business and in the ICE technologies state of the art
 - Identification of the TRL level
 - Assessment of the degree of innovation
 - Assessment of the business potential in national and international markets

Recommended reading

1. Porter, A. L. & Cunningham, S. W. (2005). Tech Mining: Exploiting New Technologies for Competitive Advantage (1st Ed). John Wiley & Sons
2. Bercovitz, J. & Feldmann, M. (2006). Entrepreneurial Universities and Technology Transfer: A Conceptual Framework for Understanding Knowledge-Based Economic Development. Journal of Technology Transfer
3. Howlett, H.; Gabry, B.; Musial-Gabrys, K.; Roach, J. Innovation Through Knowledge Transfer 2012, Springer Berlin Heidelberg, 2012
4. Silva, L.; Facó, R., Transferência de Tecnologia e Inovação entre Universidade-Indústria, Novas Edições Académicas, 2015
5. Tavares, L. Prospecção, Proteção e Transferência de Tecnologia: Um Manual de Propriedade Intelectual, ABREU, 2012

Teaching and learning methods

Cooperative work among students, with research oriented on the subjects under study. "Practice-based learning" strategies will be adopted, in particular by carrying out intellectual property, market and R&D strategies needed for the implementation of new products and processes in the area of ICE technologies. Visits to the IPB research centers will be promoted, with particular to CeDRI.

Assessment methods

- Continuous assessment - (Regular, Student Worker) (Final, Supplementary, Special)
- Practical Work - 40% (Practical work related with the main contents of the curricular unit.)
- Projects - 10% (Preparing projects and formalising applications.)
- Development Topics - 50% (Team working sessions with a discussion of topics on the development and management of the company.)

Language of instruction

Portuguese, with additional English support for foreign students.

Electronic validation

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15-10-2023	16-10-2023	31-10-2023