TecnoCampus
Escola Superior
de Ciències Socials i de l'Empresa

Centre adscrit a la

upf. Universitat
Pompeu Fabra
Barcelona

LOGISTICS, SUPPLY CHAIN & MARITIME BUSINESS

35008 - DATA MINING & BIG DATA FOR LOGISTICS

General information

- Academic year 2023/24
- Course: First
- Trimester: Third
- Number of credits: 2
- Teachers:
    - Manuel Guerris Larruy <mguerris@tecnocampus.cat>

Teaching languages

- Spanish

Presentation of the subject

Data Mining and Big Data for Logistics.

The TecnoCampus will provide teachers and students with the digital tools needed to carry out the course, as well as guides and recommendations that facilitate adaptation to the non-contact mode.

Competences/learning outcomes

Basic

- CB7 How to apply the knowledge acquired and the ability to solve problems in new or little-known environments within broader (or multidisciplinary) contexts related to the area of study.

- CB8 - That students be able to integrate knowledge and confront the complexity of formulating judgments based on information that, being incomplete or limited, includes reflections on the social and ethical responsibilities linked to the application of their knowledge the judgments

- CB9 How to communicate the conclusions and the knowledge and ultimate reasons that support the students to specialized and non-specialized audiences in a clear and unambiguous way

Specific

- CE1. Show autonomy with critical distance in issues or issues related to the maritime business, logistics and the supply chain and in the application of innovative ideas in these fields.

- CE2. Application of tools and methodologies that facilitate creative and innovative thinking in everyday situations linked in the supply chain environment, logistics, and maritime businesses.

- CE5. Design and implement logistics systems, evaluating the different possible alternatives, technical and resource constraints and taking into account coordinated management and management throughout the supply chain.

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CE6. Evaluate the performance of the entire logistics system, taking into account the fulfillment / no of the planned quality, cost and service objectives to detect and prioritize areas of improvement.

- CE7. Manage (plan, program and control) the flow of materials and information (flow of the supply chain) through the direction and coordinated management of the areas of purchases, production and physical distribution of the company.

Transversal

- CT1. Show willingness to learn about new cultures, experience new methodologies and foster international exchange in the context of logistics, the supply chain and maritime businesses.

- CT2. Show entrepreneurial leadership and management skills that strengthen personal confidence and reduce risk aversion.

- CT3. Develop tasks by applying the acquired knowledge with flexibility and creativity and adapting them to new contexts and situations.

No data

Contents

Big data:

- History, definition and context

- Big data as a strategic factor in business

Data and its treatment

- Data structure

- Storage technologies

- Language programming.

Data Mining:

- What Data Mining is

- Objectives and potential

- Advanced analytics methods: machine learning

Tools for processing

- Free software

- Proprietary software

- Software as a Service (SaaS)

Big data and logistics

- Specific applications

- Sectorial trends.

Sustainable Development Goals

- 12 - Responsible consumption and production

- 08 - Decent work and economic growth

- 04 - Quality education

- 09 - Industry, innovation and infraestructure

Evaluation system

- Participation in the activities presented in the classroom: 30% of final grade

- Individual activity to present once all sessions finished: 70% of final grade

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