



SHORT COURSES

INVENTORY THEORY

Description

The students will be introduced to the basic models of mathematical inventory theory. The course is designed for doctoral students and it will provide students with a firm foundation of the models to be able to understand the body of research in this field. With the tools and methodologies discussed in this course, the students will be able to conduct research in this field through developing inventory models drawing upon earlier work. Both deterministic and stochastic models single and multi location models will be discussed. The course will be conducted primarily in lectures and partly in the form of student presentations.

Topics

Topic 1: General Introduction, Economic Order Quantity Model and its Extensions, Deterministic Joint Replenishment Model.

Topic 2: Periodic Review Deterministic Inventory and Lot Sizing Models.

Topic 3: Stochastic Single Item Continuous Review Models (both exact and heuristic approaches).

Topic 4: Stochastic Single Item Periodic Review Control Policies (base-stock and newsvendor models).

Topic 5: Multi-Echelon Inventory Models (METRIC model, power of two policies, Clark-Scarf Model).

Calendar

Abril 2015							Mayo 2015						
Lun	Mar	Mié	Jue	Vie	Sáb	Dom	Lun	Mar	Mié	Jue	Vie	Sáb	Dom
			1	2	3	4 5					1	2	3
6	7	8	9	10	11	12	4	5	6	7	8	9	10
13	14	15	16	17	18	19	11	12	13	14	15	16	17
20	21	22	23	24	25	26	18	19	20	21	22	23	24
27	28	29	30				25	26	27	28	29	30	31



15:00 h. - 16:30 h.
20 minutes break.
16:50 h. - 18:20 h.

Professor



**Dr. Mustafa
Çağrı Gürbüz**

Mustafa Çağrı Gürbüz is **PhD Program Director** and **Professor of Supply Chain Management at the MIT-Zaragoza International Logistics Program**. He is also a **Research Associate at the MIT Center for Transportation and Logistics**.

He completed his PhD at the Department of Management Science at the University of Washington in July 2006. He earned his BS and MS degrees from the Department of Industrial Engineering at Bilkent University, Turkey in 1999 and 2001, respectively.

His main research interests are inventory and supply chain management, optimizing distribution systems, contracts, and modeling operations systems. Mr. Gurbuz has been a consultant to AT&T Wireless, ARES, and RENFE. He has also published in journals such as Management Science and Operations Research Letters.

■ General Information

WHO SHOULD APPLY

PhD students in different areas of Management such as Economics, Operations Management, Supply Management, Logistics, Transportation, etc.

HOW TO APPLY

All candidates must apply directly to the Admissions Office. Applications should be emailed to phdadmissions@zlc.edu.es; Please write "Application PhD Course Inventory Theory" as the subject of your email. Below is a list of the supplemental documents needed to complete your application:

1. Specify your area of research interest and/or PhD Project, and your status of your PhD program.
2. Submit a current resumé, including academic degree information with GPA information following each degree, as well as relevant work experience.

REGISTRATION FEE: 700€

Discounts are available for multiple attendees from the same University or Institution.

This fee includes tuition and materials. Accommodation must be arranged by the participants individually and is not included in the course fee.

The program is taught entirely in English.

The course is equivalent of 4 ECTS points. A course certificate is issued by the **Zaragoza Logistics Center (ZLC)** as a part of the **MIT Global SCALE Network**.

Deadline for applications:

April 6, 2015

ZARAGOZA LOGISTICS CENTER (ZLC)

ZLC is an international center of excellence for research and education in **SCM** (Supply Chain Management), established by the Government of Aragón in Spain in partnership with the **Massachusetts Institute of Technology (MIT)** and the University of Zaragoza.

A core purpose of ZLC is to integrate supply chain management into business. ZLC serves as an exclusive model for closer cooperation between industry, public administration and academia.

Research areas: Supply Chain Security and Risk Management, Inventory Management, Behavioural Supply Chain Management, Transport and Urban Mobility, Logistics Clusters, Supply Chain and Finance, Global Health and Humanitarian Logistics and Green Supply Chains.

<http://www.zlc.edu.es/research/>

ABOUT MIT ZARAGOZA PHD PROGRAM IN LOGISTICS AND SUPPLY CHAIN MANAGEMENT

The main aim of the **PhD Program in Logistics and Supply Chain Management** is to develop outstanding scholars who will go on to pursue distinguished careers in research and education. As a **unique focused PhD Program on Supply Chain Management** students work intensively with our faculty to create new knowledge in fields of interest such as supply chain coordination, inventory management, supply chain finance, supply chain risk management and security, and supply chain innovation, among others.

As part of their methodological and research training, **PhD students spend one or two semesters at MIT.**

<http://www.zlc.edu.es/phd/>

CONTACT INFORMATION

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