CIVIL 707 – Construction Supply Chain Management  
(15 Points, FC 2017) (Block Course)

COURSE CO-ORDINATOR: Dr Vicente Gonzalez

LECTURE TIMES: Lectures Module 1: Mon 13 – Tue 14 – Wed 15 March
Lectures Module 2: Mon 15 – Tue 16 – Wed 17 May
Schedule: 9.00 am – 6.00 pm

ROOM: 439-G10

PHILOSOPHY:

Construction as a special kind of production requires special attention in its design, planning and control, which in turn depends upon the project managerial practices on-site and its relationship with the external stakeholders such as material suppliers, subcontractors, architectural and engineering suppliers, among others. In this regard, a key function emerges to improve the way in which is currently managed this relationship: supply chain management. It provides the necessary principles, tools and methodologies to deal with actual “logistics” and “supply chain” issues in construction. Initially, this course will explore the development of logistics and supply chain management from manufacturing. Then, its application in construction according to different production management philosophies and analytical approaches will be addressed. Finally, the role of information technology and sustainability in construction supply chain management will be analysed. As a result, at the end of this paper, students will be able to understand the main logistic and supply chain issues in construction and use different approaches to manage them in projects.

ASSESSMENT:

60%: 2 Assignments (30% each)  
40%: 1 Final test

LEARNING OBJECTIVES:

On the completion of this paper the student will understand:

- The nature of supply chain and logistics in construction,
- The role of different buffer management approaches in supply chain problems in both manufacturing and construction,
- How to design the relationship with several stakeholders in the construction supply chain, at behavioral and contractual level,
- The use of different analytical tools for managing logistics problems in construction,
- The use of different information technologies for logistics and supply chain management, and
- How construction logistics can be affected and improved by sustainable principles.
COURSE OUTLINE:

- Logistics and Supply Chain Management Basics
- Logistics and Supply Chain Management in Construction
- Factory and Construction Physics
- Variability and Buffering in Production
- Relational Contracting and other Contractual Issues in the Construction Supply Chain
- Analytical Approaches to deal with Logistics Issues in Construction
- Reliable Commitment Model: Buffer Management and Negotiation with Third Parties
- Information Technology in Construction Logistics and Supply Chain Management
- Construction Logistics Simulation
- Sustainable Logistic and Supply Chain Management
- Other Topics

TEXTS:

There are no prescribed texts. Students may find a number of texts which cover the course material well, and should refer to several where possible.

- **Recommended reading**


- Others

-Core readings from recent and classic journal papers.

-MSc or PhD Theses.

-Public reports.

-Other suggested publications.

Course outline available in CANVAS