

Advanced Topics in Supply Networks - Description

- **Course Objective:** A Supply Network (SN) is essentially several series of linked suppliers, manufacturers, retailers and customers often belonging to different companies but performing transactions among each other. SN deals with setting and controlling performance measures such as costs and customer service levels to support and strengthen the competitive advantages/strategies of companies involved in transactions. In this context, SNs are primarily concerned with the efficient integration of the companies involved so that products are distributed to customers in the right quantity and at the right time.

This course studies mathematical models that explore the key issues associated with the design and management of SNs. One of the key issues in SN is to minimize total costs subject to various service requirements, such as leadtimes, product availability, quality. A special attention will be given to integration of supply chain decisions and consequential difficulties. A considerable portion of the course is devoted to models that treat uncertainty explicitly.

- **Prerequisites:** OPRE 6330 and either OPRE 7330 or OPRE 6201, or consent of the instructor.
- **Supplementary course:** OPRE 6366 Supply Chain Management and OPRE 6363 Inventory Control.
- **Target Audience:** The course is designed primarily for Ph.D. students in SOM. But it will be of great interest especially to the second and third year Ph.D. students. The course can provide a smooth transition from a course taking mode to a research mode. It can give ideas for new research papers (relevant for second year Ph.D.s) and help extend current research projects (relevant for third and fourth year Ph.D.s).
- **Teaching style:** Traditional lecturing for the first 5-6 weeks and discussion of research papers for the remaining weeks.
- **Paper list:** Under construction, interested parties are welcome to make suggestions.
- **More information** can be obtained from the instructor (metin@utdallas.edu).