

Supply Chain Engineering and Multi-Criteria Decision Making

Overview

The course provides state-of-the-art models, concepts and solution methods that are important in the design, control, operation and management of supply chain systems. Most supply chain design and operational problems have conflicting objectives. Hence, the course will emphasize the application of multi-objective quantitative models and methods to optimize the components of an integrated supply chain.

The course will cover the following key aspects for the effective management of supply chains:

- An introduction to Multiple Criteria Decision Making and Supply Chain Management
- Network design and Tactical Decision Making in supply chains with multiple objectives
- Inventory control in supply chains
- Multi-objective Meta-heuristics (such as genetic algorithms and simulated annealing) for location, distribution and inventory management in supply chains
- Supplier Selection: Multi-criteria Models and Methods
- Managing disruption risks in supply chains

Lectures and management games are incorporated for an effective learning in the course, apart from case studies and assignments that will serve to stimulate the interest and involvement of participants, especially real-life applicability of the concepts and also exposure to research issues.

Dates for the Course	27th June, 2016 to 8th July, 2016
Host Institute	IIT Madras
No. of Credits	2
Maximum No. of Participants	50
You Should Attend If...	<ul style="list-style-type: none">▪ You are an engineer or Operations Research professional interested in the management and operations of supply chains.▪ You are a student or a faculty member interested in the use of quantitative techniques with multiple objectives, and interested in pursuing research or higher studies in Industrial Engineering or Operations Research or Operations Management.
Course Registration Fees	<p>The participation fees for taking the course is as follows:</p> <p>Student Participants: Rs.2000 Faculty Participants: Rs.4000 Industry Participants: Rs.6000</p> <p>The above fee is towards participation in the course, course material/handout, relevant text book, and any other resource utilized in IIT Madras.</p> <p>Mode of payment: Demand draft in favour of “Registrar, IIT Madras” payable at Chennai</p>
Accommodation	<p>The participants may be provided with hostel accommodation, depending on the availability, on payment basis. Request for hostel accommodation may be submitted through the link: http://hosteldine.iitm.ac.in/iitmhostel</p>

Course Faculty



Dr. Ravindran is a Professor and past Department Head of Industrial and Manufacturing Engineering at the Pennsylvania State University. His graduate degrees are from the University of California, Berkeley, where he received an M.S. and a Ph.D. in Industrial Engineering and Operations Research. Dr. Ravindran's area of specialization is Operations Research with research interests in multiple criteria decision-making, financial engineering, healthcare delivery systems and supply chain optimization. He has published 6 books and over 150 journal articles in Operations Research. His most recent book on *Supply Chain Engineering* received the Institute of Industrial Engineers **Book-of-the-Year Award** in 2013. Dr. Ravindran is a **Fulbright Fellow** and a **Fellow** of the Institute of Industrial Engineers. He has been a consultant to AT&T, CNH America, General Motors, IBM, Kimberly Clark, General Electric, U.S. Department of Transportation, the Cellular Telecommunications Industry Association and the U.S. Air Force.



Dr. C. Rajendran is a Professor in the Department of Management Studies at Indian Institute of Technology Madras. His research interests include production planning and scheduling, total quality management and supply chain management. He has more than 125 publications related to these areas in many international journals such as European Journal of Operational Research, International Journal of Production Research, Journal of Operational Research Society, International Journal of Operational Research, Computers and Operations Research, and International Journal of Logistics Systems and Management. He is a recipient of Alexander von Humboldt Fellowship of Germany.

Course Coordinator

Name: Prof. C. RAJENDRAN

Phone: +44 2257 4559/ 92834 50499

E-mail: craj@iitm.ac.in

crajitm@gmail.com

URL: <http://www.doms.iitm.ac.in>