



Operations Research Society of the Philippines

*In Collaboration with*

Technological Institute of the Philippines

*Present*



## Practical Operations Research for Faculty and Practitioners: A Hands-on Case-based Approach

Learn optimization,  
simulation and modeling of  
complex problems

Learn real world applications  
in Supply Chain and Service  
Systems

Leading executives at organizations worldwide have used operations research techniques to make better decisions. Here is a sample testimonial from a satisfied OR customer.

Nick Donofrio  
Senior Vice President, Technology and Manufacturing  
IBM

*"Operations research professionals are the key to harnessing the opportunity created by e-business and deep computing. I'm convinced that organizations that make the best use of decision technology [operations research] are those that will be the most successful from now on."*

[http://www.scienceofbetter.org/can\\_do/testimonials.htm](http://www.scienceofbetter.org/can_do/testimonials.htm)

### What is Operations Research?

**Operations Research (OR)** is the discipline which, by combining methods from many scientific fields, aims at modeling, understanding, managing and optimizing complex systems (Hugo Scolnik, IFORS VP at large, 2011).

## How You Will Benefit

Learn **REAL WORLD** applications of OR that would enable the academe to teach OR more effectively and industry practitioners to apply OR in solving complex decisions.

To give academe and industry practitioners a hands-on experience using **READILY AVAILABLE** software in developing and implementing OR tools and to focus more on the aspect of analyzing and evaluating the resulting decisions.

## Who Should Attend

Educators in Business Management, Industrial Engineering, Management Engineering, Mathematics

Planning Analysts, Supply Chain Analysts, Financial Analysts, Production Planners, Demand Planners and Managers who want to learn how they can apply OR in their industry

## What You Will Learn

- ⤴ Understand OR and its applications
- ⤴ Create spread sheet models using Excel Solver
- ⤴ Solve optimization problems using GAMS
- ⤴ Build simulation models using Promodel
- ⤴ Case Studies: Supply Chain, Service Systems

## Faculty

Top Speakers from the Center of Operations Research and Management Science (CORMS) of De La Salle University-Manila



Dennis Beng Hui, MSc IE

Coaches and trains Six Sigma and Lean. Specializes in statistical analysis and process modeling using simulation. Past and present clients are MERALCO, Johnson and Johnson Asia Pacific, Philip Morris Philippines Manufacturing, Inc, San Miguel Corporation, Petron Corporation, Sunpower Philippines and Zuellig Pharma.



Richard Li, MSc IE

Teaches mathematical modeling and optimization. Specializes in process analysis of service systems, market research and statistical analysis. Past and present clients are San Miguel Corporation, Zuellig Pharma, Galderma Philippines Inc., Makati Medical City and Malayan Insurance Corporation.



Dennis Cruz, MSc IE

Trains supply chain management and quantitative analysis. Specializes warehouse management, inbound and outbound logistics, and supply chain modeling. Past and present clients are National Foods Limited – Australia and Zuellig Pharma.



Bryan Gobaco, MSc IE

Trains Six Sigma and quantitative Analysis. Specializes in statistical and process analysis, supply chain modeling and optimization and simulation of service systems. Past and present clients are San Miguel Corporation, National Foods Limited Australia, Jollibee Foods Corporation, Sunpower Philippines and KFC/Mister Donut.

# Course Outline

## Day 1: Concepts and Case Presentations

Morning

### Overview on OR and Case Presentations in Supply Chain

This session starts with an overview on OR and provides applications of OR in industry. The session will cover the concepts of Linear Programming and Integer Programming in relation to **Supply Chain**.

- Definition and Scope of OR/MS
- Practical Applications of OR/MS
- Modeling the Business Process
- Challenges in Model Building
- Linear Programming as a decision making tool for the business
- Applications in Supply Chain Management
- Interpreting and Making Decisions using Linear Programming

**Cases:** Multi-Product Distribution System and Multi-Product Supply Chain System

Afternoon

This session will cover the use of simulation in understanding complex business processes. Emphasis will be on how to build a simple simulation model, how to analyze and how to interpret the simulation results using discrete event systems simulation (DESS). A hands-on workshop will allow participants to understand, appreciate and correctly apply the concepts of simulation as applied to a **Service System**.

- Modeling Concepts
- Uses, Advantages and Disadvantages of Simulation
- Steps in Doing a Simulation Study
- Building a Simulation Model
- Running Simulation Models
- Analysis of Simulation Results and comparing System Designs

## Day 2: Software Hands-on Workshop (3 two-hour hands-on workshop)

The hands-on workshop is a one-day workshop demonstrating the use of the software including illustrations related to the cases discussed in Day 1. These are Spreadsheet Modeling and Optimization using EXCEL SOLVER, GAMS (A modeling language) and Simulation using Promodel.

### Workshop 1: Using Spreadsheet Modeling and Excel Solver

This workshop will guide participants in using EXCEL and SOLVER in building and analyzing linear programming models. Participants will be taught the basic features of SOLVER and how this common spreadsheet application can easily be used in decision making.

### Workshop 2: Using General Algebraic Modeling Software (GAMS)

This workshop will orient participants in the use of GAMS. GAMS is a modeling language that allows us to take advantage of the natural construct of our models and use this within the software. GAMS is able to make use of a variety of solvers that can provide flexibility in solving models in various forms.

### Workshop 3: Using Promodel for Building Simulation Models

This workshop will provide easy guidance in using Promodel for building and running simulation. Participants will be taught how to analyze and run scenarios using this software.

## Seminar Information

**Seminar Timing:** Registration: 7:30 am Course proper: 8:00 am – 5:00 pm.  
15 minute morning and afternoon breaks at 10:00 am and 3:00 pm. Lunch 12:00 – 1:00 pm.

**Venue:** Technological Institute of the Philippines, 938 Aurora Boulevard, Cubao, Quezon City  
Day 1 – Freshman Building, Seminar Room  
Day 2 – Freshman Building, Computer Lab

	ORSP Member	Non ORSP Member
<b>Fee*</b>		
: Academe (before June 15)	P3,500	P4,500
(June 16-July 15)	P4,000	P5,000
: Industry (before June 15)	P4,000	P5,000
(June 16-July 15)	P4,500	P5,500

\*Fee includes seminar fee, handouts, use of computer lab, am/pm snacks and lunch for 2 days

## Registration Form:

Last Name: \_\_\_\_\_  
Company / School: \_\_\_\_\_  
Address: \_\_\_\_\_  
Designation: \_\_\_\_\_  
Email address: \_\_\_\_\_  
Cell phone: \_\_\_\_\_  
Landline: \_\_\_\_\_

## For inquiries:

Please call or email ORSP at +632 439 9496 or [secretariat@orsp.org.ph](mailto:secretariat@orsp.org.ph) c/o Des Cañamo.

## Payment Details:

### Please deposit cash or cheque to:

Account Name:	Operations Research Society of the Philippines <i>(please do not abbreviate)</i>
Account No:	00151-0028-666
Bank Name:	Banco de Oro - Libis

Please email or fax your deposit slip with this registration form to ORSP Secretariat office c/o Des Cañamo, telefax 02 439 9496; mobile 0927 877 5219; e-mail [secretariat@orsp.org.ph](mailto:secretariat@orsp.org.ph).



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## LOCATION MAP

