

System Dynamics: Modeling, Simulation and Analysis: Practical guide with examples for the design of industrial, economic, biological, engineering and environmental models. By Juan Martn Garca Functions.

This book allows the reader to acquire step by step in a time efficient and uncomplicated the knowledge in the formation and construction of dynamic models using Vensim. Many times the models are performed with minimal current data and very few historical data the simulation models that the student will design in this course accommodate these analyses with the construction of realistic hypotheses and elaborate behavior models: That's done with the help of software Vensim that helps the construction of the models as well as performing model simulations, At the end of the book the reader is able to: Describe the components of a complex system. Diagnose the natural evolution of the system under analysis. Create a model of the system and present it using the simulation software, Carry out simulations with the model Tables and Delays III. Download the models of this bookThe authorJuan Martn Garca is teacher and a worldwide recognized expert in System Dynamics with than twenty years of experience in this field: Industrial Engineer (Spain) and Postgraduated Diploma in Business Dynamics at Massachusetts Institute of Technology MIT (USA): He teaches Vensim online courses in based on System Dynamics: System Dynamics: Modeling Simulation and Analysis: Practical guide with examples for the design of industrial economic biological engineering and environmental models[1]

In order to predict the behavior of the system.The book contains downloadable material !Environmental Area 1. Population Growth 2. Ecology of a Natural Reserve 3. Effects of the Intensive Farming 4. The Fishery of Shrimp 5. Rabbits and Foxes 6. A Study of Hogs 7. Ingestion of Toxins 8. The Barays of Angkor 9. The Golden Number Management Area 10. Production and Inventory 11. CO2 Emissions 12. How to Work More and Better 13. Faults 14. Project Dynamics 15. Innovatory Companies 16. Quality Control 17. The impact of a Business Plan Social Area 18. Filling a Glass 19. A Catastrophe Study 20. The Young Ambitious Worker 21. Development of an Epidemic 22. The Dynamics of Two Clocks Mechanical Area 23. The Tank 24. Study of the Oscillatory Movements 25. Design of a Chemical Reactor 26. The Butterfly Effect 27. The Mysterious Lamp Advanced Exercises (Vensim PLE PLUS) 28. Import data from an Excel file 29. Building Games and Learning Labs 30. Interactive models 31. Input Output Controls 32. Sensitivity Analysis Annex I. Guide to creating a model II. Frequently Asked Questions FAQs IV. Ph.D.

