
The course is designed for those interested in the diffusion of new products and technologies. The course is designed around the well-known “Bass Model” of the adoption and diffusion of new products and technologies (Bass, Frank M., “A New Product Growth Model for Consumer Durables,” *Management Science*, 15 (January), 215-227). This paper has been cited hundreds of times and is one of the most cited papers in marketing. The model developed in the seminal paper has been extended and modified in numerous ways and has been widely applied in business for evaluating and forecasting new products and technologies. The course deals with the underlying theories of diffusion models and with applications of these models in forecasting the adoption and diffusion of new products and technologies.

The materials for the course consist of: reading materials of packets of papers dealing with the weekly topics, software and computer programs for use with the weekly exercises, and a basic textbook on Marketing Models that will be useful primarily for methodological purposes. The website http://www.basseconomics.com contains useful materials for the course as does http://www.utdallas.edu/~mzjb/

The course will be taught in seminar format with class discussion of exercises and projects. Student teams will be assigned to develop forecasts of new products and technologies. Software for the course includes Bass Basics, Bass Model Solver, and SAS programs for the basic Bass model, the Generalized Bass Model, the Norton Bass generations model, and the Bass-Bass generations model.

Grades will be based on the quality of the weekly assignments, topic presentations, and a term paper, with equal weight given to each of these.

**WEEKLY ASSIGNMENTS**

**Week 1**
Topic: Introduction and Overview
PowerPoint “Bass Model Historical Overview”

**Week 2**
Topic: Bass Model Theoretical Development and Philosophy of Modeling
Reading Assignment: Papers Week 2


Exercise Assignment Week 2

Week 3
Topic: Parameter Estimation and Applications of Basic Bass Model For Forecasting (Market Potential, Peak Time, Takeoff Time, “Guessing by Analogy”)

Reading Assignment: Papers Week 3


Exercise Assignment Week 3

Week 4
Topic: Multiple Generations of Technology

Reading Assignment: Papers Week 4


**Exercise Assignment Week 4**

**Week 5**  
**Topic:** Applications of Norton-Bass and Bass-Bass Model For Forecasting  
**Reading Assignment:** Papers Week 5


**Exercise Assignment Week 5**

**Week 6**  
**Topic:** The Generalized Bass Model and Decision Variables  
**Reading Assignment:** Papers Week 6


**Exercise Assignment Week 6**

**Week 7**  
**Topic:** Applications of GBM for Forecasting  
**Reading Assignment:** Papers Week 7


**Exercise Assignment Week 7**
Week 8  
**Topic:** Estimation Issues for Diffusion Models  
**Reading Assignment:** Papers Week 8


Exercise Assignment Week 8

Week 9  
**Topic:** The Experience Curve and Pricing  
**Reading Assignment:** Papers Week 9


Exercise Assignment Week 9

Week 10  
**Topic:** Normative Models and Optimal Policies For New Technologies  
**Reading Assignment:** Papers Week 10


Exercise Assignment Week 10

Week 11
Topic: Moore’s Law, Hedonic Analysis, and The Design Frontier
Reading Assignment: Papers Week 11

Bass, Portia I. 2000. [Cost Function.ppt]


Exercise Assignment Week 11

Week 12
Topics: Micro Level Diffusion Models and Cellular Automata and Multi-product Linkages in Diffusion
Reading Assignment: Papers Week 12


Exercise Assignment Papers Week 12

Week 13
Topic: Multi-product Linkages in Diffusion
Reading Assignment: Papers Week 13


Exercise Assignment Papers Week 13

Week 14
Topic: Review and Term Project Presentations

Week 15
Topic: Review and Term Project Presentations