

Basic GAMS Class Introduction

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Basic GAMS Class Introduction

Objectives and Method

A. Learning objectives

1. GAMS and GAMS use
 - a. Will start elementary but go fast
 - b. Backup provided by examples and documents
2. Firm Impact Analysis risk neutral and risk averse
3. Investment Analysis

B. Time is short -- Back up Course Materials

1. Reference materials on pdf backing up course
2. Notebook of Overheads
3. CDROM
 - a. All class examples
 - b. Reference Materials
 - c. Real Models

C. Mix of listening and doing hopefully about 60/40

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Class materials – a guide to their structure

This class is supported by a number of reference documents and class examples.

The fundamental support documents are the **overheads** that are distributed in the notebook. The overall course outline also indicates the name of the overhead set that will be under use during each course segment.

The overheads refer to a number of other course support documents and class examples. These include **class examples**, **reference text materials**, and **class applications**.

Class examples Generally, the class examples appear under the subdirectory **example** and are then contained in the subdirectory that is consistent with the name of the overhead series we are working from. Thus, when working with the introductory material the overheads are called **gamintro** and the class example files are in the **example/gamintro** subdirectory. Generally I try to place filenames in **green** within the overheads.

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Reference text materials. Generally the reference text materials appear under the subdirectory **document**. In the class overheads references to these materials are colored in **purple**.

Class applications. During the class there will be references made several real applications. The files implementing these applications are generally kept in subdirectory name associated with the application. Again the filenames will be appearing in the overheads in **green**

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Class materials – a guide to their structure

A list of part of the Reference Documents
and their Function

Reference Item Name	Class Intro	Basic GAMS	Firm Analysis Modeling	Multiple Locations	GAMS for Applied Modeling	Improved Output / Spreadsheets	CGE Modeling	Firm Risk Modeling	Indivisible Investment modeling
Outline	X								
Newbook.pdf		X		X	X	X		X	X
cgecoursenotes.htm, cgeingams.pdf		X			X		X		
erwinhomepage.htm		X			X	X			X
Fixmodel.pdf		X	X		X	X			
Rutherford.htm					X	X	X		
McCarl User Guide (through IDE)		X			X	X	X		X
tips		X			X				
usegck					X				
probab									X

Other documents can be gotten from GAMS web site
www.gams.com and www.gams.de

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CDROM Contents

Document subdirectory	All resource materials
Example subdirectory	All examples plus some other models. Generally accessed through IDE library
Yourwork subdirectory	Blank to start. Present to catch your work
Adobe subdirectory	Copy of Adobe PDF reader
Fixmodelsubdirectory	Examples from fixmodel book that is in document directory
zipfile subdirectory	Installation files as follows
basadvgams.exe	contains all class files. Run this to install files without default write protection (which happens if you copy in the cd)
gamsadds.exe	contains all additions to GAMS system mainly documents for docs directory and inclib files like gnupltxy.
Root directory	contains setup.bat that installs self extracting archives, along with installation instructions and class license file

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Course Schedule

Day 1

8:00-8:15	Introduction A. Participant Introduction B. Class Introduction	
8:15-9:00	GAMS and the IDE	gamintro
9:00-9:45	Break and Hands on 1	
9:45-10:30	More basic GAMS Model Inspect/Document	gamint2 inspect
10:30-11:00	Hands on 2	
11:00-11:45	Power of GAMS	power
11:45-1:15	Lunch	
1:15-1:45	Quick Conditionals and Report Writing	qcondrep
1:45-2:30	Hands on 3	
2:30-3:30	Firm Modeling	firmimp
3:30-4:15	Hands on 4	
4:15-5:00	Good Modeling Practice	goodmodl
5:00	Recess for day	

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Course Schedule

Day 2

8:00-8:45	Finish Firm Impact	firmimp
8:45-9:15	Hands on 5	
9:15-10:30	Fixing Misbehaving Models	fixmod
10:30-11:15	Hands on 6	
11:15-12:00	Multiple Locations - transportation	multiloc
12:00-1:30	Lunch	
1:30-2:30	Firm Risk Modeling	firmrisk
2:30-3:00	Solving NLPs	nlp
3:00-3:45	Hands on 7 and break	
3:45-4:15	Integer Programming	Indivis
4:15-4:45	More integer programming	Integer
4:45-5:30	CGE Modeling	cge
5:30	Recess for Day	

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Course Schedule

Day 3

8:00-8:15	Advanced Class Introduction	
8:15-9:00	Using GAMSIDE	useide
9:00-9:15	The Users Guide	
9:15-9:20	Hands on Introduction	handson
9:20-10:00	Break and Hands on 8 or 12 or 13	
10:00-10:45	Controlling Algebra – Conditionals &Sets	condition
10:45-11:30	Hands on 9	
11:30-12:15	Doing a Comparative Analysis	compare
12:15-1:30	Lunch	
1:30-2:15	Output Improvement and Management	output
2:30-3:15	Links with Other Programs part I	link
2:30-3:15	Hands on 10	
3:14-4:00	Links with Other Programs part II	link
4:00-4:45	Hands on 11 or 12 or 13	
4:45-5:00	Basic Wrapup	
5:00	Recess for the day	