Basic GAMS Class

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Basic GAMS Class
Software and Class Materials Installation Guide

1. Put the GAMS CD in your machine. Run the \Systems\Win\Setup.exe file from this CD. Choose to install GAMS in the default directory (c:\program files\gams22.0 (with an American Windows Machine) or c:\programme\gams22.0 (with an European Windows machine) or close thereto). At the end of this process you will be prompted for a license file. Put in the GAMS CD or floppy I gave you and install the class license from its root directory or copy in the file gamslice.txt from wherever you have it. Note your license file must be no more than 6 months old to work with the release I am giving you.

2. Put the Course CD in your machine. Run the file Setup.bat. It will use a version of WINZIP to extract the files. During this extraction you will be prompted for
   a. The name of the directory in which you put the files for the GAMS system c:\program files\gams22.0 (with an American Windows Machine) or c:\programme\gams22.0 (with an European Windows machine) where we can also put in the class oriented enhancements on your computer. You should use the directory where the IDE was put to be consistent with step 1 above. ***(note: not putting this in this location will cause the class examples and documentation retrievals to work improperly)*** and then will extract the zip file gamsadds.exe
   b. The name of a directory in which to place all the class files on your computer. I recommend you use C:\basgams and then will extract the zip file basgams.exe

   Note the self-extracting archive program I am using does not close down after extraction and you have to click on the close option. You will go through two extracts one for gamsadds.exe that is put in the GAMS system directory - c:\program files\gams22.0 or c:\programme\gams22.0 and the second for basgams.exe that is put in the c:\basgams directory. You will have to close each after the OK screen appears.

3. If there is not a version of the Adobe Acrobat reader already installed on your computer, install the acrobat reader. Execute Ar505eng.exe which is contained in the adobe directory on your CD. The acrobat reader allows you to view .pdf files.

4. Open the IDE under file and library. Point the user library file to c:\basgams\example so you have access to the class library of files. You may browse when doing this by double clicking in the box where the file is to be defined. Also point to C:\Program Files\GAMS22.0\docs\bigdocs\gams2002 (C:\Programme\GAMS22.0\docs\bigdocs\gams2002 in Europe) if you wish to access the new user manual files through the library manager.

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

Basic GAMS Class Introduction

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.

Basic GAMS Class Introduction

Class materials – a guide to their structure

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**

Basic GAMS Class Introduction

Class materials – a guide to their structure

Overheads and Topics Covered

Overhead Set Name	Class Intro	Basic GAMS	Firm Analysis Modeling	Multiple Locations	GAMS for Applied Modeling	Improved Output / Spreadsheets	Firm Risk Modeling	CGE	Indivisible Investment modeling	Spreadsheets
Introduction	X									
Intro to GAMS		X								
Intro GAMS - pt2		X								
Model Inspection		X	X	X						
Power of GAMS		X	X							
GAMS User Guide		X			X	X				
Firm Impact			X		X					
Good Modeling		X			X					
Comparative Anal					X					
Conditionals		X			X					
Output improve		X	X		X					
Fixing Models		X	X		X					
Spreadsheet links										X
Multiloc				X		X		X		
CGE		X			X			X		
Firm Risk							X			
Handling Indivisibilities									X	
Integer									X	

Basic GAMS Class Introduction

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

Basic GAMS Class Introduction

Class materials – a guide to their structure

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
basgams.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

Basic GAMS Class Introduction

Course Schedule

Monday

8:15-8:30	Introduction A. Participant Introduction B. Class Introduction	
8:30-9:30	GAMS and the IDE	gamintro
9:30-10:15	Break and Hands on 1	
10:15-11:30	More basic GAMS	gamint2
11:30-12:45	Lunch	
12:45-1:45	Hands on 2	
1:45-2:30	Power of GAMS	power
2:30-3:15	Hands on 3	
3:15-4:15	Firm Modeling	firmimp
4:15-5:00	Hands on 4	
5:00	Recess for day	

Basic GAMS Class Introduction

Course Schedule

Tuesday

8:30-9:30	Finish Firm Impact	firmimp
9:30-10:00	Good Modeling Practice	goodmodl
10:00-10:45	Hands on 5	
10:45-11:30	Firm Comparative Runs	compare
11:30-12:30	Model Inspect and Doc GAMS User Guide	inspect
12:30-1:45	Lunch	
1:45-2:45	Conditionals	condition
2:45-3:30	Hands on 6	
3:30-4:30	Output Improvement	output
4:30-5:15	Hands on 7	
5:15	Recess for Day	

Basic GAMS Class Introduction

Course Schedule

Wednesday

8:15-9:00	CGE Modeling	cge
9:00-10:00	Fixing Misbehaving Models	fixmod
10:00-10:45	Hands on 8	
10:45-11:45	Spreadsheet links	Spread
11:45-1:00	Lunch	
1:00-1:45	Hands on 9	
1:45--2:30	Multiple Locations - transportation	multiloc
2:30-3:00	Hands on 10 and break	
3:00-3:45	Firm Risk Modeling	firmrisk
3:45-4:30	Hands on 11 and break	

Basic GAMS Class Introduction
Course Schedule

Thursday

8:15-9:00	Solving NLPs	nlp
9:00-9:45	Hands on 15	
9:45-10:30	Integer Programming	Indivis,
10:30-11:15	More integer programming	Integer
11:15-12:00	Open Discussion and Wrap it up	Wrap-up
12:00	Workshop adjourns	