Advanced GAMS Class
On Line Version

Introduction

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Advanced GAMS Introduction
Objectives and Method

A.   Learning objectives

    1.   Better use of current GAMS

    2.   Advanced features in GAMS
        a.   Will introduce many but go fast
        b.   Backup provided by examples and documents

    3.   Model Debugging
        a.   Within GAMS
        b.   With GAMSCHK

    4.   Improved large Scale Modeling

B.   Time is short -- Extensive back up Course Materials

    1.   Course reference backup on pdf

    2.   Personalized PDF of Overheads

    3.   Zip file
        a.   All class examples
        b.   Reference Materials

C.   Mix of listening and doing hopefully about 50/50

Advanced GAMS Introduction
Class Conduct
Class materials – a guide to their structure

This class is supported by documents and class examples.

The fundamental documents are the **overheads** as
distributed in the notebooks. Course outline indicates
the overheads use during each course segment.

The overheads refer to other course support documents
and examples. These include **class examples**,
reference materials

> **Class examples** are in subdirectory **example** and are
> contained in a subdirectory consistent with the
> name of the associated overhead. Thus, when
> covering GAMSIDE the overheads are called
> **useide** and the class example files are in the
> **example/useide** subdirectory. Generally I try to
> place filenames in **green** within the overheads.

Reference materials. Generally reference materials
appear in subdirectory **document** or in the **Expanded
GAMS User Guide** which is accessed through the
IDE. In the overheads references to these materials
and to other overheads are colored in **purple**.

Advanced GAMS Introduction
Main Reference Documents and their Function

Reference Name[a]	Brief Title	GAMS Features	Improved GAMS usage	Model Debugging	GAMSCHK Usage	Large Scale Modeling
fixmodel.pdf	So Your GAMS Model is not Working Right by McCarl	X	X	X	X	X
gnupltxy.pdf	GNUPLTXY Users guide by Schneider	X	X			
Newbook.pdf	Applied Math Programming by McCarl and Spreen		X	X		X
Rutherford.htm	Web page acessing utilities by Rutherford	X	X			
Sensitivity Analysis.htm	GAMS document on sensitivity analysis				X	
tips.pdf	Tips on GAMS usage by McCarl	X	X			
usegck.pdf	An article on using GAMSCHK			X		X
erwinhomepage.htm	Erwin Kalvahagen's web site with a number of utilities		X	X		X
createlib.pdf, uselib.pdf	Material on building and using library in IDE	X	X			
gamsmodeling.pdf, lp.pdf, mip.pdf	Erwin Kalvahagen's book chapters on applied GAMS modeling	X	X			X
The Excel Interface Doc.htm	XLIMPORT, XLEXPORT, XLDUMP documentation	X	X			
cgecoursenotes.htm	CGE class notes	X	X			

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Advanced GAMS Introduction
CD-ROM 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
Fixmodelsubdirectory	Examples from fixmodel book that is in document directory
zipfile subdirectory	Installation files as follows
mccarlclass.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

Advanced GAMS Class Introduction
Course Schedule

Day 1 (all times US Central -Chicago)

7:30-8:00	Question session	
	Advanced Class Joins	
8:00-8:15	Advanced Class Introduction	
8:15-9:00	Using GAMSTUDIO	useide
9:00-9:15	Documentation	
9:15-9:45	Hands on 8	
9:45-10:30	Controlling Algebra - Conditionals and Sets	condition
10:30-11:15	Hands on 9	
11:15-12:00	Doing a Comparative Analysis	compare
12:00-12:45	CGE modeling	CGE
12:45	Recess for day	
12:45- 1:15	Optional dialogue session	
Overnight	Comparative part of 11 and if interested 13	

Advanced GAMS Class Introduction
Course Schedule

Day 2

Time	Session	
7:30-8:00	Question session	
8:00-8:45	Output Improvement and Management	output
8:45-9:30	Hands on 10	
9:30-10:15	Spreadsheet Links	link
10:15-10:45	Hands on 11	
10:45-11:45	Using GAMS MIRO	
11:45-12:30	Small to Large Model Development	smllrg
12:30-12:45	Basic Wrapup	
12:45-1:00	Hands on Introduction	handson
1:00	Recess for Day	
1:00- 1:45	Optional dialogue session	
	Farewell to Basic Class People	
Overnight	Hands on 14	

Advanced GAMS Class Introduction
Course Schedule

Day 3

Advanced and Basic to Advanced People only

7:30-8:00	Question session	
8:00-9:00	Pre-solution Checking	presol
9:00-9:30	Calculations	calculat
9:30-10:15	Hands on 15	
10:15-10:45	Conditional Compilation	condcomp
10:45-11:45	Post Solution Debugging of Nonsensical Models	unreal
11:45-12:30	Hands on 16 and break	
12:30-1:15	Scaling in GAMS	scale
1:15	Recess for day	
1:15- 1:45	Optional dialogue session	
Overnight	Hands on 17	

Advanced GAMS Class Introduction
Course Schedule

Day 4

Advanced and Basic to Advanced People only

7:30-8:00	Question session	
8:00-8:30	Fixing Execution Errors	execerr
8:30-9:30	Fixing Unbounded and Infeasible Models	unbinf
9:30-10:00	Break and Hands on 18	
10:00-10:45	Execution Time Speed and Memory	speedup
10:45-11:15	Saves and Restarts	savrestar
11:15-12:00	Break and Hands on 19	
12:00-12:30	Advanced Bases	advbasis
12:30-12:50	Solution, Solvers and Reformulations	solver
12:50-1:00	Wrap It Up	wrapup
1:00	Workshop adjourns	
1:00- 1:30	Optional dialogue session	