

# EcoMod Modeling School

## Energy and Environmental CGE Modeling with GAMS



### COURSE OBJECTIVES

The course will introduce all the tools for constructing and implementing large-scale, dynamic, multinational and multisectoral general equilibrium models for environmental policy analysis. By the end of the course the participants will have acquired detailed knowledge of and extensive hands-on experience in:

- The structure of general equilibrium models for environmental policy analysis,
- developing multinational CGE models,
- introducing dynamics,
- building the database for such models,
- building social accounting matrices,
- modeling energy markets,
- modeling complex nesting structures,
- introducing greenhouse gases,
- modeling tradable pollution permits,
- modeling technical change,
- modeling backstop technologies,
- implementing the model on the computer using GAMS,
- formulating scenarios and running policy simulations,
- reporting and interpreting the results,
- linking GAMS and Excel for reading and reporting data.

### AUDIENCE

The course will focus on multinational and multisectoral Modeling and focus specifically on environmental issues. This course is only accessible to those who have some experience in general equilibrium modeling and to the alumni of the EcoMod Modeling School or on-line courses.

### FEES

The fee for the course is US\$3,425. This includes course materials (including a free course license of GAMS for two months), lectures, computer labs, morning and afternoon coffee breaks, receptions. University students and staff get a discount of 25 percent of the above mentioned amount. Please include a photocopy of your student or staff card.

A discount of \$500 is offered on the regular fee, and \$400 on the university fee for registrations and payments completed six weeks before the start of the course.

Institutional group rates are available for two or more persons attending during the same course period.

### REGISTRATION

For registration and further information, please contact Patricia MacNeil ([office@EcoMod.net](mailto:office@EcoMod.net)) or visit [www.ecomod.net](http://www.ecomod.net)

### THE ECOMOD DIFFERENCE

EcoMod's Modeling School offers the world's leading professional training programs in:

- general equilibrium, macroeconomic and financial modeling.
- Public programs are offered three times a year - in Asia, Europe and America.
- Online courses accept registrations at any time
- Custom programs are individually tailored to suit specific institutional needs.

### ACTIVE LEARNING MODEL

The EcoMod learning model is an active process. Intensive hands-on sessions offer a step-by-step approach to learning modeling and software. Participants benefit from individual guidance from expert instructors.

### DECADES OF EXPERIENCE

EcoMod Modeling School is at the forefront of the ever evolving practice of policy modeling. All our faculty have extensive practical experience as leaders of modeling departments in major institutions, software developers, prominent academics, advisors to governments and business. The Head of the Modeling Division of the IMF, and the Head of the Econometric Modeling Unit of the European Commission are members of our faculty.

### PROFESSIONAL NETWORK

EcoMod Modeling School has the largest alumni network of modelers in the world with members from more than 1000 institutions in 150 countries.

Participants from international and national institutions, central banks, government agencies, universities, companies, and individual economists have benefitted from our intensive hands-on courses.



# EcoMod Modeling School

## Practical General Equilibrium Modeling with GAMS



### COURSE OBJECTIVES

The course will introduce all the basic tools for constructing and implementing large-scale applied general equilibrium models for policy analysis. By the end of the course the participants will have acquired detailed knowledge of and extensive hands-on experience in:

- the structure of open economy general equilibrium models,
- building the database for such models,
- building social accounting matrices,
- calibrating a CGE model,
- formulating a CGE model as a non linear programming problem,
- formulating a CGE model as a mixed complementarity problem,
- implementing the model on the computer using the GAMS software,
- using the solvers CONOPT, MINOS, PATH, and PATHNLP,
- modeling the labor market,
- formulating scenarios and running policy simulations,
- reporting and interpreting the results,
- linking GAMS and Excel for reading and reporting data.

### AUDIENCE

This intensive course is for those who have little or no experience in modeling and in GAMS. Participants should have knowledge of mathematics and economics to benefit from the course.

Content and Methodology:

The course uses a practical and very intensive approach to model building. The participants will actually build the model EcoMod step-by-step with guidance from the instructors: from small to large scale and from simple to complex structure. The participants will acquire extensive practical hands-on experience in building a complex, large-scale model. This will allow them to easily implement the first version of their own model using the GAMS codes of EcoMod.

### FEES

The fee for the course is US\$3,465. This includes course materials (including a free course license of GAMS for two months), lectures, computer labs, morning and afternoon coffee breaks, receptions. University students and staff get a discount of 25 percent of the above mentioned amount. Please include a photocopy of your student or staff card.

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