“Computable General Equilibrium (CGE) modelling is a challenging field. It requires mastery of economic theory, meticulous preparation of data and familiarity with underlying accounting conventions, knowledge of econometric methods, and an understanding of solution algorithms and associated software for solving large equation systems. However, the most important requirement is the ability to communicate. CGE modelling is primarily about shedding light on real-world policy issues.

While CGE modelling is challenging, it is also rewarding. CGE models are used in almost every part of the world to generate insights into the effects of policies and other shocks in the areas of trade, taxation, public expenditure, social security, demography, immigration, technology, labor markets, environment, resources, infrastructure and major-project expenditures, disasters, and financial crises. CGE modelling is the only practical way of quantifying these effects on industries, occupations, regions and socioeconomic groups.”
Introduction to Computable General Equilibrium Modelling
Presented by the Department of Economics, University of Pretoria

Peter B. Dixon & Dale W. Jorgenson
Handbook of CGE Modelling

The Department of Economics at the University of Pretoria, in collaboration with the Centre of Policy Studies in Melbourne, have been developing CGE models in South Africa for over 15 years. The University of Pretoria’s General Equilibrium Model (UPGEM) has been widely used in projects and academic publications over this period.

Programme content

The Introduction to CGE Modelling course brings together decades of CGE modelling and training experience in a comprehensive one-week package built around the UPGEM model and database of South Africa.

This course will teach participants the principles of CGE modelling; introduce them to the model’s theory and database; conduct numerous training exercises and simulations; and teach the skills necessary to master the GEMPACK solution software. As part of the training package, participants will have the chance to consult with expert instructors on bringing CGE modelling to their unit or institution, building their own CGE model and database, or conducting more advanced training courses suited to their specific needs.

Day 1
22 February 2016

• Introduction to general equilibrium modelling
• Overview of the basic tasks in CGE based analysis
• Introduction to the GEMPACK suite of applications
• Representation of CGE models in GEMPACK notation
• First look at the UPGEM theory and data

Day 2
23 February 2016

• Main theoretical mechanisms in UPGEM
• Data sources and requirements for a typical single-country CGE model
• Interrogating the UPGEM database
• Understanding CGE model closures
• Baseline forecast versus policy simulations
• Practical modelling exercises

Day 3 & 4
24-25 February 2016

• Practical modelling exercises
• Focus on interpreting CGE modelling results
• Discussion of advanced CGE modelling topics
• Preparation of group simulation with UPGEM

Day 5
26 February 2016

• Presentation of group simulation reports
• Feedback on presentations
• Review and closing

Shifting knowledge to insight
Introduction to Computable General Equilibrium Modelling
Presented by the Department of Economics, University of Pretoria

Learning outcomes
Upon completion of the course, participants will be able to:
• Understand the general methodology and capabilities of CGE models
• Understand the structure of a CGE database and its various inter-linkages
• Run CGE simulations using the GEMPACK solution software
• Interpret and present CGE simulation results in a comprehensive manner

Who should attend?
Economists and analysts interested in the economy-wide effects of proposed policy changes and external shocks on their industry, or the macro economy at large. National and provincial government officials involved in policy design, analysis or planning; industry-specific research organisations; economic research consultants; and academics.

Programme fees
R12 500.00 per delegate (VAT incl.)
Course fees include all course notes, a copy of the UPGEM training model, software and refreshments during contact days. Discounts are available to academic staff, students and institutions that send more than two participants.

Admission requirements
Prospective delegates should have some formal training or work experience related to economics.
• Bachelor degree, or higher, in Economics
• Computer literacy and experience of using a Windows PC are essential.
• Strong desire to learn CGE modelling.

Participants are encouraged to visit the Centre of Policy Studies website at http://www.copsmodels.com and explore the wide range of CGE and GEMPACK content available.

Accreditation and certification
Enterprises University of Pretoria (Pty) Ltd is wholly owned by the University of Pretoria. The University is registered as a multipurpose, public training provider in the higher education and training band. Delegates who successfully complete a course and comply with the related assessment criteria are awarded certificates by the University in recognition of their professional skills development.

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