

**ADVANCED COURSE IN APPLIED HEALTH ECONOMICS**  
***Methods for the analysis of categorical dependent variables***

**Prof. Bill Greene**  
Stern School of Business, New York University

*Hosted by the Health, Econometrics and Data Group (HEDG),*

*Centre for Health Economics and Department of Economics and  
Related Studies  
University of York, 11<sup>th</sup>-12<sup>th</sup> January 2010*

A two-day course focusing on the use of categorical dependent variables with wide applicability to research in health economics. The course will be delivered by Professor Bill Greene, a world-renowned expert in micro-econometrics and the analysis of categorical variables.

The course is aimed at PhD students and researchers or policy makers working in applied health economics. It will introduce participants to different treatments for categorical dependent variables with a focus on established and recently developed techniques. The course will cover continuous choice models, binary choice, and models for ordered and unordered choice. Appropriate terminology and formal methodology for estimating these models will be presented together with extensions to cover panel data, partial effects and recent developments in the field. The focus will be on introducing the fundamental principles and terminology encountered in the literature.

The aims of the course are to introduce research professionals to the main techniques used in the analysis of individual choice. By the end of the course, participants should be able to:

- Appreciate different approaches to modelling individual choice
- Select appropriate methods for empirical estimation
- Develop an understanding of methods for estimation and inference
- Interpret results from analyses

## Course content

The course will cover topics relevant to the analysis of health and health care data. The provisional programme is outlined below.

Programme	Morning	Afternoon
<b>Day One</b>	10.00-10.30 Registration  <i>Continuous choice models</i>  <i>Introduction to models for categorical data</i>  <i>Formal models for categorical data</i>	<i>Models for binary choice:</i> <ul style="list-style-type: none"><li>• Functional form</li><li>• Estimation and inference</li><li>• Coefficients and partial effects</li><li>• Functional form</li><li>• Measuring fit</li><li>• Panel data</li><li>•</li></ul>
<b>Day Two</b>	<i>Models for ordered choices:</i> <ul style="list-style-type: none"><li>• Fundamentals</li><li>• Estimation and inference</li><li>• Analysing probabilities</li><li>• Partial effects</li><li>• Panel data</li><li>•</li></ul>	<i>Models for unordered choices:</i> <ul style="list-style-type: none"><li>• Multinomial logit (MNL)</li><li>• Extensions to the MNL</li><li>• Recent developments</li></ul>

For further reading it is recommended that participants consult:

1. Greene, W.H., Hensher, D.A. *Modelling Ordered Choices: A Primer and Recent Developments*. Cambridge University Press, forthcoming 2010.
2. Greene, W.H. (2008) *Econometric Analysis (6<sup>th</sup> Edition)*. Englewood Cliffs, Prentice Hall.

Further useful resources on discrete choice models can be found on Bill Greene's webpage:

<http://pages.stern.nyu.edu/~wgreene/DiscreteChoice.htm>

## The programme

The course will be lead by Professor Bill Greene and supported by members of HEDG.

**REGISTRATION FORM**  
***Methods for the analysis of categorical dependent variables***  
**Prof. Bill Greene**

***A short course hosted by the Health, Econometrics and Data Group (HEDG),  
University of York, 11<sup>th</sup>-12<sup>th</sup> January 2010***

Participation on the course is free of charge. Accommodation for the nights of 10<sup>th</sup> and 11<sup>th</sup> January will be provided on campus in en suite rooms at a cost to participants of £36 per night. Please note places are limited. Payment should be arranged through the Course Administrator. Limited funds will be made available to reimburse reasonable travel expenses.

Title: Dr/Ms/Mr \_\_\_\_\_

Name: \_\_\_\_\_

Position: \_\_\_\_\_

Organisation: \_\_\_\_\_

Postal Address: \_\_\_\_\_

Postcode: \_\_\_\_\_

Email: \_\_\_\_\_

Tel: \_\_\_\_\_ Fax: \_\_\_\_\_

***Please post or fax your registration forms to:***

Kerry Atkinson, Course Administrator, Centre for Health Economics, Alcuin A Block,  
University of York, Heslington, YORK, YO10 5DD, UK, Fax: +44 (0) 1904 321402.

Alternatively online registration will be available shortly:

<http://www.york.ac.uk/res/herc/research/hedg/index.htm>

*The Health, Econometrics and Data Group is supported by funding from the  
Economic and Social Research Council under the grant RES-060-25-0045.*