

# SAS<sup>®</sup> Education

Providing knowledge through global training and certification

2011

## SAS Analytics Master Classes

[www.sas.com/australia/training](http://www.sas.com/australia/training)

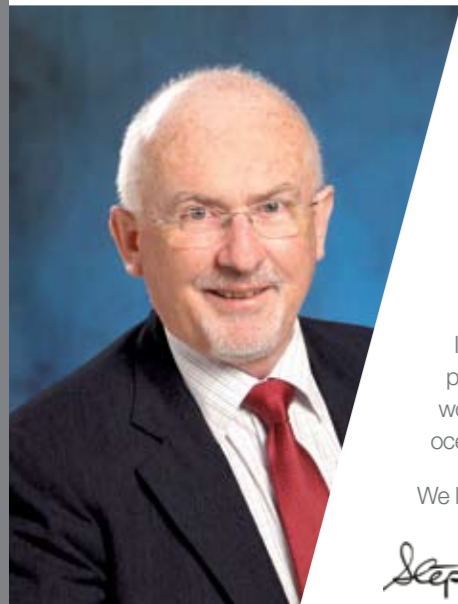
1800 727 269

[www.sas.com/nz/training](http://www.sas.com/nz/training)

04 917 6802

email: [ed@oz.sas.com](mailto:ed@oz.sas.com)

## Exploit the Information in Your Data Warehouse



You've got data and plenty of it. But are you making the most of it?

Very often the information that you need to run your business – what will happen next, who will buy which product or service, which customers might switch to a competitor, and who might come on board – is already held in your corporate data. You just need the tools and the skills to find it.

SAS Education will help you create real business advantage by revealing the hidden information buried in your organisation's data.

In 2011 we are presenting a series of Analytics Master Classes led by International thought leaders and practitioners in the art of creating real business value from the data you already possess. Whether you work in government, banking, telecommunications, retail or any industry that needs to make sense of an ocean of data, you will benefit from the insights that our experts will provide.

We look forward to seeing you in our Master Classes.

**Steve Dowse**  
**Manager, SAS Education**  
**Australia and New Zealand**

What if you could use the hidden information buried in your data to build **real competitive advantage**?

**You can. Attend SAS Education's Analytics Master Classes to discover real value in your corporate data.**

**The Power to Know.®**

## SAS® Analytics Master Classes



### Michael Berry

Michael Berry has co-authored some of the most widely read and respected books on data mining. Michael is an active practitioner of data mining. His books reflect many years of practical, hands-on experience down in the data mines.

Michael is the founder and a principal consultant for Data Miners Inc. a company he started in 1997. He is also an Adjunct Professor of Marketing Analytics at the Carroll School of Management at Boston College, where he teaches a course on Marketing Analytics. Prior to founding Data Miners, Michael spent 8 years at Thinking Machines Corporation. There he specialised in the application of massively parallel supercomputing techniques to business and marketing applications, including one of the largest database marketing systems of the time.

A data mining educator as well as a consultant, Michael is in demand as a keynote speaker and seminar leader in the area of data mining generally and the application of data mining to customer relationship management in particular.

#### Data Mining Techniques: Theory and Practice

This course introduces a data mining methodology that is a superset to the SAS SEMMA methodology around which SAS® Enterprise Miner™ is organised. The course also introduces a wide range of data mining algorithms and both theoretical knowledge and practical skills. In this class, you work through all the steps of a data mining project, beginning with problem definition and data selection, and continuing through data exploration, data transformation, sampling, portioning, modeling, and assessment.

##### Learn how to:

- use a data mining methodology
- build and use decision trees and neural networks for modeling and scoring
- use survival analysis and create survival curves.

##### Who should attend:

Business analysts, their managers and statisticians.

WELLINGTON	
<b>Dates:</b>	15-17 June
<b>Price:</b>	\$3500 per person

#### Applying Survival Analysis to Business Time-to-Event Problems

This course introduces survival analysis in the context of business data mining. The focus is on understanding customer behaviours that have a time-to-event component using SAS® Enterprise Guide®.

##### Learn how to:

- identify appropriate opportunities for applying survival analysis techniques
- estimate how long a customer will remain active
- measure competing risks in survival analysis modeling.

##### Who should attend:

Business analysts, their managers, and statisticians.

SYDNEY	
<b>Dates:</b>	20-21 June
<b>Price:</b>	\$2500 per person

MELBOURNE	
<b>Dates:</b>	23-24 June
<b>Price:</b>	\$2500 per person

## SAS® Analytics Master Classes



### Professor Bart Baesens

Professor Bart Baesens is an assistant professor at K. U. Leuven (Belgium), and a lecturer at the University of Southampton (United Kingdom). Bart has done extensive research on predictive analytics, data mining, customer relationship management, Web analytics, fraud detection and credit risk management. His findings have been published in international journals such as the Machine Learning Journal, the Management Science Journal, IEEE Transactions on Neural Networks, IEEE Transactions on Knowledge and Data Engineering, IEEE Transactions on Evolutionary Computation and the Journal of Machine Learning Research.

Bart has presented at numerous international conferences and he is also co-author of the book Credit Risk Management: Basic Concepts which was published in 2008. Bart regularly tutors, advises and provides consulting support to international firms on data mining, predictive analytics and credit risk management policy.

#### Advanced Analytics for Customer Intelligence Using SAS®

This advanced, highly interactive course will clarify how you can adopt state-of-the-art data mining techniques for complex customer intelligence applications. You will receive a sound mix of both theoretical and technical insights as well as practical implementation details, illustrated by several real-life cases.

#### Learn how to:

- identify apply a series of powerful, recently developed, cutting-edge data mining techniques
- ensure the practical application of these techniques to optimise strategic business decisions
- explore a futuristic vision of how new emerging data mining techniques might change your key business processes
- deploy, monitor and optimally back-test data mining systems.

#### Who should attend:

Those involved in estimating, monitoring, or maintaining predictive models for various types of customer intelligence; those involved with using data mining techniques for various types of customer intelligence.

	MELBOURNE
<b>Dates:</b>	29-31 August
<b>Price:</b>	\$3500 per person

	SYDNEY
<b>Dates:</b>	5-7 September
<b>Price:</b>	\$3500 per person

## SAS® Analytics Master Classes



### Dr. Goutam Chakraborty

Dr. Goutam Chakraborty has a B.Tech (Honors) in mechanical engineering from the Indian Institute of Technology, Kharagpur, a PGCGM from the Indian Institute of Management, Calcutta, an M.S. in statistics and a Ph. D. in marketing from the University of Iowa. He has held managerial positions with a subsidiary of Union Carbide USA and with a subsidiary of British American Tobacco UK. He is a Professor of Marketing at Oklahoma State University, where he has taught data mining and CRM applications, database marketing, new product development, marketing research, digital business strategy, Web-business strategy, electronic commerce, interactive marketing and product and pricing management for the past 17 years.

Goutam has presented numerous programs and workshops to executives, educators and research professionals in the U.S., Europe, Singapore, Hong Kong, Dubai, Abu Dhabi and India. He has won many teaching awards including the Regents Distinguished Teaching Award and the Wendell H. Bailey Faculty Excellence Award at OSU, the Outstanding Direct Marketing Educator Award - given by the Direct Marketing Educational Foundation New York; Professor of the Year Award at CIMBA Italy; Great Executive MBA Instructor Award at the University of Iowa, Iowa City; and Outstanding Marketing Teacher Award, given by the Academy of Marketing Science, Coral Gables, Florida.

#### Customer Segmentation Using SAS® Enterprise Miner

Emphasising practical skills as well as providing theoretical knowledge, this hands-on course covers segmentation analysis in the context of business data mining. Topics include the theory of segmentation, as well as four main analytic tools for segmentation: hierarchical clustering, K-means clustering, RFM cell method and SOM/ Kohonen method.

#### Learn how to:

- understand and apply both attitudinal and behavioural segmentation tools and techniques on customer data
- use descriptive as well as predictive segmentation
- profile and validate segments
- evaluate stability of segments over time
- assign probability of segment membership to new data.

#### Who should attend:

Anyone who wants to learn how to find meaningful segments in their customer data, focusing on practical business solutions rather than statistical rigor; business analysts, managers, marketers, programmers and others can benefit from this course.

	MELBOURNE
<b>Dates:</b>	8-9 August
<b>Price:</b>	\$2500 per person

	SYDNEY
<b>Dates:</b>	11-12 August
<b>Price:</b>	\$2500 per person

## SAS® Analytics Master Classes



### Jeff Zeanah

Jeff Zeanah is the President of Z Solutions, Inc. a firm focused on the support of organisations through predictive analytics and exploratory data mining. His primary interests and research concern the problems organisations face to improve their business decisions through data analysis, including predictive analytics and the selling of the results. Jeff has consulted with industry leaders in manufacturing, retail, public health, science, finance, nutrition and utilities. He is an instructor for SAS Institute Inc. A frequent guest lecturer at universities on the topic of applying analytics to business, he serves on the Board of the Institute for Business Intelligence at The University of Alabama.

As a recognised expert on neural networks and a broad range of exploratory data mining tools Jeff has authored papers on neural networks, exploratory data mining and the implementation of those techniques in organisations. He is the developer of exploratory approaches and techniques that have been used Worldwide by Fortune 500 companies, independent researchers, Government agencies and over 30 universities Worldwide. His approaches have been applied in areas as diverse as improving manufacturing processes, analysing market research, tasting wines, searching for oil, controlling river flow, sizing electric transformers and classifying stars.

#### Exploratory Analysis for Large and Complex Problems

This course is intended for analysts working with virtually any type of exploratory data analysis problem. Discovery in a complicated data set is one of an analyst's toughest problems. The course covers this discovery process using many real-world problems. There is a focus on fraud detection, with the recognition that the core principles of modeling to solve fraud detection are the basis of all exploratory data analysis. Analytical methods used in the course include decision trees, logistic regression, neural networks, link analysis and social network analysis. In addition, analysts receive practical advice on presenting complex findings to their audience.

##### Learn how to:

- analyse in multiple dimensions
- escape the limits of common methods
- explore your most complex problems
- successfully present findings to your audience
- find rare events
- find hidden relationships
- reach deep into your data and find what others cannot.

##### Who should attend:

Data analysts (market researchers, fraud researchers, and sales analysts); expert modelers or those who want to become expert; and the creative and curious.

	WELLINGTON
<b>Dates:</b>	31 Oct - 1 Nov
<b>Price:</b>	\$2500 per person

	SYDNEY
<b>Dates:</b>	3-4 November
<b>Price:</b>	\$2500 per person

	CANBERRA
<b>Dates:</b>	7-8 November
<b>Price:</b>	\$2500 per person

	MELBOURNE
<b>Dates:</b>	10-11 November
<b>Price:</b>	\$2500 per person

## SAS® Analytics Master Classes



### Dr. Catherine Truxillo

Dr. Catherine Truxillo has been a Statistical Training Specialist at SAS since 2000 and has written or co-written SAS training courses for advanced statistical methods including: multivariate statistics, linear and generalised linear mixed models, multilevel models, structural equation models, multiple imputation methods for missing data, statistical process control, design and analysis of experiments and cluster analysis. Although she primarily works with advanced statistics topics, she also teaches SAS courses using SAS/IML (the interactive matrix language), SAS® Enterprise Guide®, and JMP software. Catherine's previous experiences with teaching, statistical consulting and software design led her to a job teaching statistics for SAS.

Before moving to SAS, Catherine completed her Ph.D. in Social Psychology with an emphasis in Statistics at The University of Texas in Austin. While at UT Austin, she completed an internship with the Math and Computer Science Department's statistical consulting help desk and taught a number of undergraduate courses. While teaching and performing her own graduate research, she worked for a software usability design company conducting experiments to assess the ease-of-use of various software interfaces and website designs.

#### Mixed Models Analyses Using SAS®

This course teaches you how to analyse linear mixed models using PROC MIXED. A brief introduction to analysing generalised linear mixed models using PROC GLIMMIX is also included.

##### Learn how to:

- analyse data (including binary data) with random effects
- fit random coefficient models and hierarchical linear models
- analyse repeated measures data
- obtain and interpret the best linear unbiased predictions
- perform residual and influence diagnostic analysis
- deal with convergence issues.

##### Who should attend:

Statisticians, experienced data analysts, and researchers with sound statistical knowledge.

	SYDNEY
<b>Dates:</b>	18-20 May
<b>Price:</b>	\$3300 per person

#### Multilevel Modeling of Hierarchical and Longitudinal Data Using SAS®

This course teaches students how to identify complex and dynamic patterns within multilevel data to inform a variety of decision-making needs. The course provides a conceptual understanding of multilevel linear models (MLM) and multilevel generalised linear models (MGLM) and their appropriate use in a variety of settings.

##### Learn how to:

- use basic multilevel models
- use three-level and cross-classified models
- use generalised multilevel models for discrete dependent variables.

##### Who should attend:

Researchers in psychology, education, social science, medicine, and business, or others analysing data with multilevel nesting structure.

	MELBOURNE
<b>Dates:</b>	23-25 May
<b>Price:</b>	\$3300 per person

## SAS® Analytics Master Classes



### Dr. Terry Woodfield

Dr. Terry Woodfield is a statistical services specialist in the Education Division of SAS. Dr. Woodfield has more than 28 years of SAS experience and has provided mentoring services in the areas of statistical forecasting, predictive modeling, and data mining. He is active in the statistics profession, presenting papers at numerous statistical conferences and professional meetings and he has served on steering committees in data mining and forecasting. He has helped develop forecasting and predictive modeling solutions for insurance, energy, and retail companies and has been an expert witness in utility rate-making hearings. Before joining SAS, Dr. Woodfield was the Chief Statistician at HNC Software. His other prior experience includes university teaching and research.

#### Text Analytics with SAS® Text Miner

This course covers the functionality of SAS Text Miner software. In this course, you will learn to use SAS Text Miner to uncover underlying themes or concepts contained in large document collections, automatically group documents into topical clusters, classify documents into predefined categories and integrate text data with structured data to enrich predictive modeling endeavors.

##### Learn how to:

- convert unstructured character data into structured numeric data
- group documents using similarity measures
- identify topics in a document collection
- classify documents based on derived or user-supplied topic definitions
- extract a subset of documents with term-based and string-based query filters
- apply association discovery techniques to help understand the importance of noun phrases
- address problems from the areas of forensic linguistics, document categorisation and information retrieval
- use textual data to improve predictive models.

##### Who should attend:

Statisticians, business analysts, market researchers, managers using data mining, students of data mining.

SYDNEY	
<b>Dates:</b>	18-19 July
<b>Price:</b>	\$2200 per person

MELBOURNE	
<b>Dates:</b>	25-26 July
<b>Price:</b>	\$2200 per person

#### Advanced Predictive Modeling Using SAS® Enterprise Miner

This course teaches you how to optimise the performance of predictive models beyond the basics. The course continues the development of predictive models that begins in the Applied Analytics Using SAS Enterprise Miner course.

##### Learn how to:

- use advanced techniques for input selection and model assessment
- construct and evaluate two-stage and multi-stage models using SAS Enterprise Miner
- evaluate variability in model predictive performance.

##### Who should attend:

Predictive modelers and data analysts.

SYDNEY	
<b>Dates:</b>	21-22 July
<b>Price:</b>	\$2200 per person

MELBOURNE	
<b>Dates:</b>	28-29 July
<b>Price:</b>	\$2200 per person

## SAS® Analytics Master Classes



### Dr. Mike Patetta

Dr. Mike Patetta is a senior instructor and course developer in the Education Division at SAS. A respected instructor, Mike has taught more than 300 analytical and statistical courses during his tenure at the Company. Mike's uncanny ability to relate course material to a customer's business problems makes him one of the Division's most requested instructors.

However teaching is not his only passion; Mike is also a prolific course developer, serving as the primary developer for some of the Division's most popular courses in the SAS analytics curriculum.

Since joining SAS in 1994, Mike has served as the primary author for such courses as Categorical Data Analysis Using Logistic Regression, Longitudinal Data Analysis with Discrete and Continuous Responses, and Survival Analysis Using the Proportional Hazards Model. He co-authored the Predictive Modeling using Logistic Regression course and has written a number of specialty courses including Fitting Poisson Regression Models Using the GENMOD Procedure and Determining Power and Sample Size Using SAS/STAT Software.

#### Bayesian Analyses Using SAS®

The course focuses on Bayesian Analyses using the PHREG, GENMOD, and MCMC procedures. The examples include logistic regression, survival analysis, mixed models and zero-inflated Poisson models which can be applied to a wide variety of fields and show the strengths of the Bayesian approach. There are also several examples of meta-analysis which shows how multiple data sets are synthesized and analysed.

##### Learn how to:

- explain the concepts of Bayesian Analysis
- illustrate Bayesian Analysis in PROC PHREG and PROC GENMOD
- incorporate prior distributions in a Bayesian Analysis
- illustrate a Bayesian Analysis approach in a clinical trials setting using PROC MCMC.

##### Who should attend:

Researchers in the fields of business, medicine, and social science who are interested in the Bayesian Analysis approach.

MELBOURNE	
<b>Dates:</b>	3-4 October
<b>Price:</b>	\$2200 per person

CANBERA	
<b>Dates:</b>	6-7 October
<b>Price:</b>	\$2200 per person

SYDNEY	
<b>Dates:</b>	10-11 October
<b>Price:</b>	\$2200 per person



**Dr. Bob Lucas**

Dr. Bob Lucas PhD, Director, Statistical Training and Technical Services, SAS Institute, has a PhD in Statistics from The Colorado State University and over 27 years' experience as an applied statistician. Dr. Lucas worked for 17 years at Research Triangle Institute applying statistical techniques to collect and analyse data for a broad range of scientific and business problems.

During his tenure at the SAS Institute, Dr. Lucas has developed and taught advanced statistics; time series, data mining and mathematical optimisation classes as well provided customised training or consulting in many industries including government, pharmaceuticals, banking, manufacturing and retail.

**Survival Data Mining: Predictive Hazard Modeling for Customer History Data**

This advanced course identifies the benefits and pitfalls of using survival analysis for business intelligence. Designed for data analysts, it covers both theoretical justification of various survival data mining methods and their practical implementation using SAS software.

**Learn how to:**

- build models for time-dependent outcomes derived from customer event histories
- account for competing risks, time-dependent covariates, censoring and truncation
- use techniques to model current status data and to evaluate the predictive performance of the model.

**Who should attend:**

Predictive modelers, data analysts, and statisticians.

	MELBOURNE
<b>Dates:</b>	7-9 December
<b>Price:</b>	\$3300 per person
	SYDNEY
<b>Dates:</b>	12-14 December
<b>Price:</b>	\$3300 per person

Registration Form

To enrol, visit [www.sas.com/australia/training](http://www.sas.com/australia/training) or complete this form and fax to (02) 9428 4759.

ORGANISATION DETAILS - Please provide details of your organisation							
Name of Organisation:			State:				
Name of Contact: (organising the training)			Title:				
☎ Telephone:			Fax: ( )				
✉ Email:							
Postal address for invoices:							
Suburb:		State:		Postcode:			
COURSE DETAILS - All course costs are per attendee and exclude GST							
Course	BKS Course	Code	Cost	Course	SAS Analytics MC	Code	Cost
Data Mining Techniques: Theory and Practice		BKS1	\$3500	Mixed Models Analyses Using SAS®		SA1	\$3300
Applying Survival Analysis to Business Time-to-Event Problems		BKS2	\$2500	Multilevel Modeling of Hierarchical and Longitudinal Data Using SAS®		SA2	\$3300
Advanced Analytics for Customer Intelligence Using SAS®		BKS3	\$3500	Text Analytics with SAS® Text Miner		SA3	\$2200
Customer Segmentation Using SAS® Enterprise Miner		BKS4	\$2500	Advanced Predictive Modeling Using SAS® Enterprise Miner		SA4	\$2200
Exploratory Analysis for Large and Complex Problems		BKS5	\$2500	Bayesian Analyses Using SAS®		SA5	\$2200
				Survival Data Mining: Predictive Hazard Modeling for Customer History Data		SA6	\$3300
PARTICIPANT DETAILS - Please provide details of your attendee(s)							
Course Date	Course Code	First Name	Last Name	Email (for training confirmation)	Mobile# (for emerg)		
PAYMENT DETAILS - Please select one of the following options							
Cheque	<input type="checkbox"/> SAS Institute Australia Pty Ltd. Locked Bag 52, Lane Cove NSW 2066						
EFT	<input type="checkbox"/> National Australia Bank BSB: 082 254 ACC: 51626 4883 Account Name: SAS Institute Australia Pty Ltd						
ETA	SAS ETA #						
Credit Card	MasterCard <input type="checkbox"/>		VISA <input type="checkbox"/>				
Card No.							
Signature							
Cardholder's Name							
<b>Your training reservation is not confirmed until full payment has been received in advance</b>							

**Declaration:**

I have read and accept the terms and conditions available on [www.sas.com/australia/training](http://www.sas.com/australia/training).

Signed \_\_\_\_\_ Dated: \_\_\_\_/\_\_\_\_/\_\_\_\_

For and on behalf of \_\_\_\_\_



# SAS® Education

Providing knowledge through global training and certification

## 2011 Analytics Master Class Schedule

▶ Learn more: [www.sas.com/australia/training](http://www.sas.com/australia/training)

Course Title	Days	May	June	July	August	September	October	November	December
<b>SAS Analytics Master Classes</b>									
Data Mining Techniques: Theory and Practice	3		15-17 WGN						
Applying Survival Analysis to Business Time-to-Event Problems	2		20-21 SYD 23-24 MEL						
Advanced Analytics for Customer Intelligence using SAS®	3				29-31 MEL	5-7 SYD			
Customer Segmentation Using SAS Enterprise Miner	2				8-9 MEL 11-12 SYD				
Exploratory Analysis for Large and Complex Problems	2						31- 1 WGN	3-4 SYD 7-8 CAN 10-11 MEL	
Multilevel Modeling of Hierarchical and Longitudinal Data using SAS®	3	23-25 SYD							
Mixed Models Analyses using SAS®	3	18-20 MEL							
Text Analytics with SAS Text Miner	2			18-19 SYD 25-26 MEL					
Advanced Predictive Modeling using SAS Enterprise Miner	2			21-22 SYD 28-29 MEL					
Bayesian Analyses Using SAS®	2						3-4 MEL 6-7 CAN 10-11 SYD		
Survival Data Mining: Predictive Hazard Modeling for Customer History Data	3								7-9 MEL 12-14 SYD

SAS reserves the right to cancel or schedule any course at its discretion. Please check the Web or contact SAS Education for the most current training schedule.

For more information please contact us on **1800-727-269** or visit us at [www.sas.com/australia/training](http://www.sas.com/australia/training).