

## POST-GRADUATE STUDIES

### Analytics Academy – Statistical Analysis and Data Mining in Business

Collegium of Economic Analyses  
Warsaw School of Economics  
in co-operation with SAS Institute Poland



Institute of Statistics and Demography  
Madalinskiego street No. 6/8 room 220  
02-513 Warszawa  
tel.: (+ 48 22) 564 92 73  
details:

[www.sgh.waw.pl/zaklady/zahzaw/podyplomowe/](http://www.sgh.waw.pl/zaklady/zahzaw/podyplomowe/)

Director of the Programme:  
Professor Ewa Frątczak

Inspired by success of the 1<sup>st</sup> level of Studies:  
Statistical Analysis and Data Mining in Business,  
encouraged by students and in accordance with high methodological and  
applications improvements in analytics, we start New post-graduates studies:

#### „Analytics Academy – Statistical Analysis and Data Mining in Business”.

Those studies are dedicated to analytics using SAS technologies and new  
methods, models and techniques of statistical analysis and data mining in  
business applications.

Studies are addressed to 1<sup>st</sup> level students or people with knowledge on the  
1<sup>st</sup> level studies. Studies on the 1<sup>st</sup> level starts each semester since February  
2008. In October 2011 new 8<sup>th</sup> edition is planned to open.

Lectures are organized in new laboratories in weekends each 2-3 weeks  
during 2 semesters.

**We invite You on the 1<sup>st</sup> edition starting in October 2011!**

Students are provided by SAS 9.2 programme, teaching materials and books.

**The programme of the course includes a total of 180 teaching hours:**

1. Advanced programming in SAS, programming in IML.
2. Data quality in research and business analysis.
3. New data imputation techniques.
4. Advanced methods and statistical models.
5. Models of qualitative data analysis and logistic regression,
6. Generalized linear models.
7. Multilevel and Mixed models.
8. Longitudinal data analysis. Regression models with fixed and random effects.
9. Survival analysis,
10. Advanced Data Mining and Social Networks.
11. Text Mining. Application of new textual data analysis in business.

Case Studies:

- **Risk management** of Consumer Finance Portfolio: underwriting process, analysis, reports KPI type, and simulations, optimization of underwriting process, evaluation of customers' profiles in time.

- **Credit scoring** – scorecards developments and application in credit process, behavioral models in cross-sell and up-sell, Basel II requirements, models monitoring.

- **Call Center** operations optimization in the collection process and in cross-sell.

- **Churn analysis** and management, reports and evaluation in time, segmentation and RFM (Recently Frequency Monetary), advanced segmentation and customers' profiles analysis, advantages of loyalty programme.

- Application of **Text Mining and Social Networks** in marketing campaigns.

- New tool SAS. Demand Driver Forecasting in models monitoring system.

An important advantage of the study is the fact that it is organized in co-operation with SAS Institute Poland which provides our student with professional software and guarantees the use of advanced technology.

Lectures are conducted by the staff of the Institute of Statistics and Demography Collegium of Economic Analyses and employees of SAS Institute Poland and invited lecturers from other universities.

Lecturers are senior staff with teaching experience, practical knowledge of SAS software, and experience in the application of advanced analytical methods for social processes and business: banking, insurance, telecommunications.