Block 5: Methodology, Explanatory.

The preparation provided by this master is inspired in the scientist-practitioner model which assumes that a good preparation as practitioner also implies the acquisition of research competences. Therefore, one of the objectives of the master is to provide the students with the knowledge and competences that make them able to carry on a research project. This implies the ability for using multivariate statistical analysis methods.

Course: Research and multivariate analysis in WOP Psychology.
UNIVERSITY: Valencia, Barcelona, and Coimbra.
ECTS: 4

Contents:

1. Introduction to research in WOP-P: design, gathering data, writing, and providing feedback.
2. Introduction to Multivariate analysis in WOP-P: concept, types of methods, general linear model, frequently used methods in WOP-P.
3. Exploratory Factor Analysis (EFA). Model and assumptions. Factor extraction. Rotation. Factor scores. Application with SPSS.
4. Confirmatory Factor Analysis (CFA). Model and assumptions. Specification. Identification. Estimation. Fit assessment. Application with LISREL.
5. Multiple regression analysis. Model and assumptions. Specification. Estimation. Fit assessment. Result interpretation. Hierarchical regression. Interaction. Non-linear models. Application with SPSS.
6. Structural equations models. Regression analysis and path-analysis. Models with observed variables and models with latent variables. Model representation. Specification. Identification. Estimation. Application with LISREL.

Didactics:

In order to attain the proposed learning objectives, a number of didactic strategies will be used:

- Oral presentations by the instructor.
- Individual and team problem resolution.
- Guided exercises.
- Computer demonstrations.
- Computer exercises.
- Analysis of published papers in which the methods of interest are used.

Teaching materials and readings:

- Berry, W. D. & Feldman, S. (1985). Multiple regression in practice. Newbury Park, CA: Sage.
- Berry, W. D. (1993). Understanding regressions assumptions. Newbury Park, CA: Sage.

- Bollen, K.A. (1989). Structural Equations with Latent Variables. New York: Wiley.
- Byrne, B. M. (1998). Structural equation modeling with LISREL, PRELIS, and SIMPLIS: Basic concepts, applications, and programming. New Jersey: Lawrence Erlbaum Associates.
- Cohen, J. & Cohen, P. (1983). Applied multiple regression/correlation analysis for the behavioral sciences, 2nd ed. Hillsdale, NJ: LEA.
- du Toit, M. & du Toit, S. (2001). Interactive LISREL: User's guide. Chicago: SSI.
- Dunteman, G. H. (1989). Principal components analysis. Newbury Park, CA: Sage.
- González-Romá, V. & Lloret, S. (1998). Construct validity of Rizzo et al.'s (1970) role conflict and ambiguity scales: A multi-sample study. Applied Psychology: An International Review, 47, 535-545.
- Jöreskog, K. & Sörbom, D. (1993). LISREL 8: Structural equation modeling with the SIMPLIS command language. Chicago: SSI.
- Jöreskog, K., Sörbom, D., du Toit, S. & du Toit, M. (1999). LISREL 8: New statistical features. Chicago: SSI.
- Kim, J. & Mueller, C. W. (1978). Factor analysis. Newbury Park, CA: Sage.
- Kim, J. & Mueller, C. W. (1978). Introduction to factor analysis. Newbury Park, CA: Sage.
- Lewis-Beck, M. S. (1980). Applied regression. Newbury Park, CA: Sage.
- Peiró, J. M.; González-Romá, V.; Ripoll, P. & Gracia, F. (2001). Role stress and work team variables in Primary Health Care Teams: A structural equations model. In J. de Jonge, P. Vlerick, A. Büssing & W. Schaufeli (Eds.), Organizational Psychology and health care at the start of the new millennium, pp.105-120. München und Mering: Rainer Hampp Verlag.
- Schroeder, L. D., Sjoquist, D. L. & Stephan, P. E. (1986). Understanding regression analysis. Newbury Park, CA: Sage.
- Tabachnick, B. G. & Fidell, L. S. (1989). Using multivariate statistics. New York: Harper Collins Publishers.