Ficha Unidade Curricular

NOVA IMS
Information Management School

Teste de teoria com modelos de equações estruturais

Ciclo de estudos:	**3º Ciclo**	**Semestre:**	**Primavera**
Código da unidade Curr.:	**300033**	**Duração:**	**S2**
Ano:	**1**	**Ano académico:**	**2023-24**

Total de horas

Total de Horas	Horas de Contacto	Nr. de horas por Semana	ECTS
140	; 25 TP	1.666666666667	5

T - Teórica; TP - Teórica e Prática; PL - Prática Laboratorial; TC - Trabalho de Campo; S - Seminário; E - Estágio; OT - Orientação Tutorial; O - Outra

Docente responsável

Pedro Miguel Pereira Simões Coelho

Outros docentes

-

Horário de atendimento

Under appointment

Objetivos Gerais

This course provides an introduction to Structural Equation Modelling (SEM), including the study of covariance-based methods (CBSEM) and the Partial Least Squares (PLS-SEM). The course also includes an approach to confirmatory factor analysis.

The applications will be supported by different software covering CBSEM and PLS.

The course is designed for non-experts in SEM and it will be focused on the understanding of SEM methodologies and their application as a research tool in business and social sciences. The main goal is to provide professionals, researchers and master or doctoral students with the modelling and data analysis tools necessary to test theories in the context of social sciences.

Objetivos de Desenvolvimento Sustentável (ODS)

Requisitos de frequência

None

Instituto Superior de Estatística e Gestão de Informação da Universidade Nova de Lisboa - NOVA Information Management School

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Objetivos de aprendizagem (OA)

OA1 With the completion of the course, participants should be familiar with the various steps associated with the specification, identification, estimation, evaluation and modification of structural equation models needed to test theories in social sciences.

OA2 Participants should also be able to select the estimation methods that are most appropriate to the context in which they work,

OA3 know the application requirements of each method and

OA4 make the most appropriate decisions at every stage of modelling.

OA5 Participants should be able to organize and present the produced results and to write the results section of a report or a scientific paper.

Conteúdos programáticos

Introduction and motivation to use SEM models
Representation of a structural equation model
Theory testing with SEM models
Confirmatory Factor Analysis
SEM modelling based on covariance
   Specification
   Identification
   Estimation
   Evaluation
   Modification
SEM modelling based on PLS
   Specification and evaluation of the measurement model
   Specification and evaluation of the structural model
How to write the results section of a project or scientific paper
Examples and exercises

Planificação da unidade curricular

Introduction and motivation to use SEM models
Representation of a structural equation model
Theory testing with SEM models
Confirmatory Factor Analysis
SEM modelling based on covariance
   Specification
   Identification
   Estimation
   Evaluation
   Modification
SEM modelling based on PLS
   Specification and evaluation of the measurement model
   Specification and evaluation of the structural model
How to write the results section of a project or scientific paper

Demonstração da coerência dos conteúdos programáticos com os objetivos de aprendizagem da unidade curricular

Introduction and motivation to use SEM models - OA1
Representation of a structural equation model OA1
Theory testing with SEM models OA1
Confirmatory Factor Analysis OA1 to OA5
SEM modelling based on covariance OA1 to OA5
    Specification
    Identification
    Estimation
    Evaluation
    Modification
SEM modelling based on PLS OA1 to OA5
    Specification and evaluation of the measurement model
    Specification and evaluation of the structural model
How to write the results section of a project or scientific paper OA5

Metodologias de ensino

Conceptual presentation
Examples and exercises
Use of software tools

Avaliação

Project 100%

Demonstração da coerência das metodologias de ensino com os objetivos de aprendizagem da unidade curricular

All methods contribute to all learning goals

Bibliografia

- Lehlin, J. C. (1987). *Latent variables models* , Hillsdale, NJ: Lawrence Erlbaum associates.
- Bollen, K.A. (1989). *Structural Equations with Latent Variables* . New York: John Wiley & Sons.
- Hair, Hult, Ringle (2014). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)* . SAGE Publications
- Henseler, J.; Hubona, G.; Ray, P. (2015). Using PLS path modeling in new technology research: updated guidelines, *Industrial Management and Data Systems* , vol. 116, No. 1.