



in association with



SAR Forum

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INTERNATIONAL RESEARCHER DEVELOPMENT COURSE

DIPLOMA IN STRUCTURAL EQUATION MODELING (ONLINE)

Course Dates and Time

28th Nov - 14th Dec 2022
6.30 PM - 8.30 PM (IST)

Online Platform

Through ZOOM

About Us

Acadents is a worldwide organizer of scientific conferences, workshops and exhibitions. Our two decades of experience in events industry specifies in creating an academic environment for those who seek for new ideas, new achievements, high skilled academic people and colleagues in all of the world. Our events are planned and organized in collaboration with faculty deans, professors, academic journals, research scientists, engineers, scholars, managers, university postgraduates and undergraduates. We have organized National and International conferences in the field of Management, Economics, Accounting, Social Sciences and Humanities, Engineering and Technological Sciences.

Our hands-on Training Courses are the Best among Academic and Researchers Fraternity.



International Certification

Diploma in Structural Equation Modeling (DISEM)

International Hands on LIVE Training Course

International Course Partner



The aim of this course is to help you better understand a solid conceptual and theoretical understanding of SEM. The course helps in effective use of SEM and its extensions in your own independent research. Without previous experience in handling AMOS, limited knowledge of Multivariate Linear Regression, Factor analysis, Reliability and Validity Analysis would be ideal to learn the concepts.

Theme of the course includes the Fundamental application of Structural models and Confirmatory Factor Analysis (CFA), Traditional path analysis, and basic model building principles like Model Identification, Specification, Estimation, Testing of hypotheses and Modification. Learners will get a chance to work on cases similar to their research interests and needs as required. Theory development is one of the focal areas of Social Science research and the benefit of any effective research should be deriving considerable theoretical implications and contributions. This course is focused to promote a deeper understanding of the theory building process and to test grounded theoretical approach. It also covers all the key concepts behind SEM with a focus on theory, practice and interpretation. It provides an extensive range of description and hands-on testing the structural equation modeling based on co-variance.

Learning Outcomes

- Learn how to manage data and use IBM AMOS Graphics to perform analyses.
- Comprehends and applies techniques on Regression, Factor reduction, Reliability and Validity Assessment in performing Structural Modeling.
- Helps in Model Building, Model Identification, Model Specification and Model Estimation based objective of the study and the availability of data to prove the Model Fit.
- Emphasis on Theoretical framework, Confirmatory Factor Analysis and Path Analysis.
- Provides clear idea to improve the chances of publishing research in peer-reviewed journals.

SEM is a simulation technique for interactions between multiple variables. This includes models of several measures (latent variables; confirmatory factor analysis) with dimensional features of creating relationships (path analysis; structural equations); The SEM framework is very general and almost every kind of data has been applied to model, but here we'll concentrate primarily on the basis of normally distributed data. The course will discuss conceptual as well as technical aspects of SEM, with the goal of preparing the learners to use SEM in your own research and to assess its application critically.

Course Prerequisites

Participants are expected to have basic statistical knowledge and are familiar with various conventional statistical methods, most notably Correlation, Multiple Regression, Factor Analysis, other basic analysis and interpretation of the results. To be successful in this course, the learners would be able to Understand the basics of Confirmatory Factor Analysis (CFA) and Path Analysis. Understand basic assumptions of Models, Predictor variables and Criterion variables. Applying basic principles of model development, model evaluation and modification in CFA and SEM. Using AMOS graphic to develop, estimate, analyze, compare and test confirmatory factors and structural models to improve model and prove the fit indices. Applying various theoretical approaches to test the relationship. Understand the basic principles of interaction and mediation of SEM. Thus, the course aims to introduce the fundamentals and basic computational principles of Structural Equation Modeling (SEM) techniques and their application in common statistics through AMOS graphic interface.

Course Content

MODULE 1: Introduction and Overview of SPSS and AMOS. Introduction to Data Analysis, What is data? Types of Measurement, Reliability and validity, Exploratory factor analysis, Exploratory factor analysis using SPSS.

MODULE 2: Introduction Overview of Structural Equation Modeling. The introduction to Structural Equation Modeling. The advantages of SEM compared to OLS.

Converting Regression Models into AMOS Graphic. The theoretical framework. The hypothesis to be tested empirically in the study. The role of theory in SEM. History of SEM. Model Estimation. Parameters. Standardization. Model Identification. Basic Assumptions of SEM.

MODULE 3: Components of Structural Equation Model. The variable terms in Structural Equation Modeling. The concept of Latent variables in Research. Types of Constructs. Exogenous construct and Endogenous construct. Types of Indicators. Reflective vs Formative Construct. Reactive Construct. Covariance Relationship, Factor Loadings, Measurement Error and Residual. The second-order construct. Concept of Mediation and Moderation in SEM. Exploratory Factor Analysis (EFA). Confirmatory Factor Analysis (CFA). Differences between CFA and EFA.

MODULE 4: Confirmatory Factor Analysis (CFA) The Measurement Model. Model modification and Validity assessment: Validating the measurement model of a latent construct. Unidimensionality. Content Validity and Construct Validity. Reliability. Cronbach's Alpha, Composite Reliability and Average Variance Extracted. Evaluating the fitness of a model. Validating the pooled measurement model. Assessing the validity and reliability for a pooled measurement model. The assessment of normality in the data. Maximum likelihood Estimation of CFA models. Parameter constraints. Standardization. Model Modification. Model fit and key fit indices. Reporting of the results.

MODULE 5: Cause and Effect Analysis The measurement model for a latent construct. Modeling of Correlational relationship. Modeling of Causal Relationship. The path model of constructs. The mediation effects for the observed variables. The mediation effects for latent constructs. Mediation test-Bootstrapping. Computing the effect sizes in a mediation test. The moderating effects for observed variable. Second order Confirmatory Factor Analysis. The factor loading of the second order and second order constructs. Non-recursive Model. Model Comparison. Specification Search. Bayesian Model.

There shall be 4 Assignments consisting of a blend of (1) a written report, and (2) practice questions in AMOS, Assignments should be (1) delivered only as a Soft Copy to the Instructor's Email Id.

If your assignments are submitted Late after the due time YOU WILL NOT OBTAIN ANY MARKS for your assignment.

Consult with the Trainer for tips and guidance on how to solve an assignment. Normal Discussion is permitted after the Course Training time for a duration of 15 minutes daily.

Assignments and Evaluation Methods

40%: FOUR ASSIGNMENTS. Four assignments will be distributed throughout the course to help you gain hands-on experience with SEM analysis. These assignments will consist of running analyses, interpreting results, and writing short (one to two page) reports.

40%: FINAL EXAMINATION. You will have the opportunity to appear for the Final Examination which shall be conducted Online by the Certifying International Academic Partner (on the last day of the Course). The Duration of the Exam will be for Two Hours. ALL CANDIDATES ARE INSTRUCTED TO APPLY FOR THE EXAM WITHOUT FAIL TO RECEIVE THE FINAL DIPLOMA CERTIFICATION.

20%: ATTENDANCE. All PARTICIPANTS are informed to be available for all FIFTEEN days in FULL for this Online Hands-on Training Course. Failing to do so will have a penalty in the marks.

GRADING POLICY

Activity	Marks
Assignments	40 Marks
Final Written Exam	40 Marks
Attendance	20 Marks

Minimum Passing Marks is 70

Your Course grade will be determined based on your points grade as follows:

Marks 96 - 100	Grade A+
Marks 91 - 95	Grade A
Marks 86 - 90	Grade B
Marks Below 85	Grade C

The Fee Structure for the Entire Hands-on Training Course (with Certification and Examination) is

INR 3100 (for Indian Participants)

\$60 (for International Participants)

(Inclusive of Taxes)

Course Fee

The Course Fee Includes:

- Life Time Licenced IBM AMOS Software
- DISEM Certificate
- DISEM Study Material (Soft Copy)

Fee Payment

Fee can be paid through the following;

Bank Transfer

Account Name: **ACADENTS**

Account Number: **114963400000282**

IFSC : **YESB0001149**

SWIFT: **YESBINBB**

Bank Name: **YES Bank**

Branch: Saibaba Colony, Coimbatore, Tamil Nadu, India.

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Registration

OPEN

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