

## NIFM - SPSS SOUTH ASIA CERTIFICATION PROGRAMME ON DATA ANALYSIS USING SPSS

### • About NIFM

The National Institute of Financial Management (NIFM) is Centre of Excellence specializing in capacity building of professionals in the fields of Public Policy, Financial Management and other governance issues for promoting highest standards of professional competence and practice. NIFM is a premier resource center for the capacity building of senior, middle and entry level of management in Government of India . NIFM also caters to the training needs of State Governments, Defence establishments, Banks, Autonomous Bodies, Local Government, Public Sector Undertakings and other Financial Institutions. Training Programmes are customized and executed for the officials from other countries as well.

NIFM plays a pivotal role in governance and administrative reforms by providing a platform for interaction and exchange of ideas & experiences among officers from different organized services, different state governments and personnel of civil and defence establishments.

Apart from capacity building, NIFM is also engaged in serious research studies in the areas of accounting, audit, financial management, parliamentary financial control and other issues related to public policy and delivery systems. The outcomes of such research studies are published and disseminated through Research Papers, Journals and Books.

NIFM has a sprawling lush green campus of 42 acres situated in N.C.R. It has state-of-art training halls, computer Labs, hostels, indoor and outdoor sports complex and library having unique architectural design.

- *Move from Data to Decision Making.*
- *Gain Fast and Accurate insights.*
- *Improved decision making with analytics.*
- *Accelerate and simplify your analysis.*



### • SPSS South Asia

Since 1999, we have in the business of providing analytical solutions around SPSS range of products in India.

For nearly two decades, we have worked to introduce analytics to academic, corporate, research and government organisations. We assisted in establishing analytics usage in many leading organisations across the country. Some of the top-tier academic institutions, government ministries and private sector companies have remained our customers for these two decades.

It is largely due to our efforts in educating and actively assisting our users on analytics and its implementation that SPSS today enjoys a leadership position amongst all other analytics solutions.

Our efforts to ensure that our customers receive the best value of investment by through continuous support, services and assistance has ensured for a base of over a 1000+ active customers. This number continues to grow every day.

In addition to providing licenses we have continued to empower our



# Programme Objectives

- This training is meant for employees of business organizations and government officers. Administrators who will need to learn on how to apply statistics and SPSS to socio economic problems, rather than attempt to become statisticians or data scientists. The training therefore, is delivered with socio economic case studies, to give the learners a grasp of the practical usage of these techniques.
- A primary objective of the training is to give the learner a hands-on feel of the environment that she would encounter while working on SPSS itself. The training does provide a simulated environment, guiding the learner step by step through the analysis process, and preparing the officers to become completely familiar with the workings of the actual software itself
- Running an analysis on the data is just the beginning. Ultimately the administrator has to draw conclusions from the results SPSS produces. The training explains the SPSS output, with a variety of examples, guiding the learner through the findings the results show up. The examples are created using public domain socio economic data, so that the learners can repeat it themselves.

## Pedagogy and Faculty

The Pedagogy will be mix of lectures, case studies, hands-on sessions, group discussions, quiz sessions etc. The faculty consists of NIFM Faculty, Faculty from SPSS, Senior Experts from Academics, Research, Public Sector Undertaking and Senior Government Officers. The eminent faculty is of the strong points of this training.

## For Whom and Duration

Government /Banks/ Financial Institutions Executives, Branch Managers, Officers/Managers, Middle Level executives, Academicians and Researchers.

Specific examples/cases will be discussed for Government/Managers/Academics/Researchers.

The programme is available in Modules of 1 day, 3 days, 5 days and 15 days.

### Five Days Programme Schedule

#### Day 1: Statistical Theory Session

<b>Basics of Statistics</b>	Learn about origin and definition of Statistics
<b>Measure of Distribution,Dispersion and Central tendency</b>	Understand mean, median, mode, variance, standard deviation and other statistical measures in detail
<b>Test of Hypothesis</b>	Learn about the concepts behind the most popular population comparison tests like t-test and ANOVA
<b>Relationship between Variables</b>	Learn the concept and theory behind the most famous statistical techniques as well as their types, i.e. correlation & regression
<b>Survival Analysis</b>	Learn about the need and solution for survival analysis techniques with their theoretical concepts

#### Day 2: Introduction to SPSS

<b>SPSS overview</b>	Say hello to the most widely used Analytical tool in India
<b>SPSS Data Structure</b>	Understand the data structure of SPSS and Learn to enter data into SPSS
<b>Data Measurement in SPSS</b>	Learn about Quantitative and Qualitative data measurement and how SPSS handles the both
<b>Data types in SPSS</b>	Learn about different data types in SPSS,e.g. Numeric,String,Currency etc
<b>Data Structure</b>	
<b>Importing Excel file</b>	Learn how to Import and work with Excel files into SPSS

<b>Importing CSV file</b>	<b>Learn how to Import and work with CSV files into SPSS</b>
<b>Importing Text file</b>	Learn how to decode a flat file and extract the data from it
<b>Variable View</b>	Understand data management while exploring Variable view
<b>Data view</b>	Understand your dataset and see the cases under study in data view
<b>Data Preparation</b>	
<b>Creating Labels</b>	Give your variables a unique label to identify the characteristics that it represents
<b>Identifying Missing Values</b>	Explore the data for any missing or abnormal entries
<b>Transforming variables</b>	Transform your variables to create new variables with the help of existing ones
<b>Recoding Variables</b>	Give your variables discrete values and labels according to your requirement
<b>Visual Binning</b>	Convert continuous data into discrete data to summarize large values into categories
<b>Outlier Detection and Treatment</b>	Identify as well as treat Extreme values and remove bias from your data
<b>Descriptive Statistics</b>	
<b>Obtaining Frequencies</b>	Understand how your data is distributed, especially qualitative
<b>Measures of Central Tendency</b>	Calculate Average, mid value and most occurrences with simple point and click interface
<b>Measures of Dispersion</b>	Understand the variation and similarity components in your data
<b>Day 3: Graphs, Reports</b>	
<b>Bar charts (Simple, Clustered and Stacked bar chart)</b>	Understand, compare and summarize categorical variables with the help of colored bars
<b>Line chart (Single as well as Multiple)</b>	Understand the trend with the help of lines
<b>Histogram</b>	Visualize the distribution of a scale variable in your sample
<b>Scatter Plots</b>	Plot two variable data entries and analyze the visual relation between them both
<b>Box plots</b>	Visualize a scale variable across a multi-categorical variable and helps identify the outliers
<b>Heat Map</b>	Colored 3D graphics for more than two variables to monitor level of activity
<b>Reports</b>	
<b>Summarize Procedure</b>	Generate report tables containing summary statistics and individual case listings
<b>Comparing Categories</b>	Identify Relationship between qualitative variables with drag and drop feature
<b>Cross-tabulation</b>	Compare two categorical variables with chi square association test
<b>Comparing Multiple Variables</b>	Create multi-way simple as well as layered tables with multiple variables to create interactive reports
<b>Display Statistics and Percentages</b>	Display summary statistics and proportions for tabulated outputs and analyze the relationship between variables
<b>Test of Hypothesis</b>	
<b>Chi-Square Test</b>	Observe the distribution of data across the levels of two variables with contingency tables
<b>One Sample T-test</b>	Test the hypothesis that sample mean adheres to the population mean
<b>Independent Samples T-test</b>	Test the hypothesis whether two samples under consideration have originated from the two independent populations
<b>Paired Samples T-test</b>	Study the impact of a treatment/enhancement on a given sample

#### Day 4: Relationship between Variables

<b>Analysis of Variances</b>	Test the hypothesis for the difference between group means across multiple levels
<b>Bivariate Correlation</b>	Identify and quantify the relationship between continuous variables
<b>Rank Correlation</b>	Relationship strength between variables of Ordinal Scale
<b>Predictive Analysis</b>	
<b>Simple Linear Regression</b>	Quantify the Linear relationship between two variables to derive a prediction equation
<b>Residual Analysis</b>	Understand the regression residuals to check prediction accuracy
<b>Multiple Linear Regression</b>	Create a prediction equation by using multiple variables
<b>Linear Regression with forward selection method</b>	Learn about causality and corner out significant variables

#### Day 5: Dimension Reduction

<b>Factor Loading</b>	Learn to reduce the size of the data to improve Analysis
<b>Factor Extraction</b>	Understand the criteria to extract significant factors in place of individual variables
<b>Principle Component Analysis</b>	Analyze uncorrelated factors to increase prediction power
<b>Screen Plot</b>	Factor extraction with the help of interactive graphical representation
<b>Survival Analysis</b>	
<b>Life Tables</b>	Learn to record and observe the patterns of a terminal event over a period of observations, while analyzing the chances of survival at each point of time
<b>Kaplan Meier</b>	Learn to estimate time to event models in presence of censored cases based on conditional probabilities
<b>Machine Learning</b>	
<b>Neural Networks</b>	Learn to estimate or approximate functions that can depend on a large number of inputs that are generally unknown
<b>Limitations of SPSS</b>	Know about various limitations of SPSS and how they can be overcome by R integration with SPSS

#### ● Schedule of Training during 2017-18

Month	Week	Duration
January	Week 3	15th – 19th January, 2018
January - February	Week 5 & 1	26th Feb -02nd Mar, 2018

## Course Fee

The training programme is open to nominee's officers of Central, State Government, Departments, Autonomous bodies, Universities, PSUs & PSBs and Local Bodies on payment of a **course fee of ₹ 46, 000/- per participant Plus tax (as applicable) 18%**.

**GST is not applicable for candidates sponsored by Central Government, State Governments and UTs.**

The course fees is to be paid through, NEFT/RTGS with this details:

Name of the Account Holder: **National Institute of Financial Management**

Beneficiary Address: **Sector – 48, Pali Road, Faridabad – 121001 Haryana, Phone Number: 0129-2465236**

PAN No.	: AAAAN2489D,
GST No	: 06AAAAN2489D1ZQ
Name of the Bank	: HDFC Bank
Address of the Bank	: Shop No. 3, Crown Complex, 1-2 Chowk, NIT Faridabad – 121 001
Saving Account No	: 50100083121045
RTGS (IFSC) Code	: HDFC0002445

**Kindly mention the fee transfer details UTR No. and date in nomination form.**

The course fee may also be paid through Demand Drafts (DD) may be drawn in favour of **National Institute of Financial Management, payable at Faridabad.**

The Course fee includes tuition fees, course material, boarding, lodging, meals and local study trips (if any) during the programme.

The programme fee/payment receipt/proof should be received at Course Director Office before the commencement of programme. In case of cancellations, the fee will be refunded only if a request is received at least 15 days prior to the day of the programme. If a nomination is not accepted, the fee will be refunded to the person / organization concerned.

## Venue and Reporting

National Institute of Financial Management (NIFM), Sector-48, Pali Road, Faridabad – 121 001, Haryana. It is located in Faridabad town on Badkhal–Pali Road, about 1 km south of Badkhal Lake crossing.

NIFM is at a distance of about 30 kms from India Gate, New Delhi and about 35 kms. from Delhi Airport. Participants are expected to reach NIFM one day before commencement of the program and proceed for their return journey within a day after conclusion of the program.





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*Please do write to us!*



## National Institute of Financial Management

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