



MAHARAJA AGRASEN INSTITUTE OF MANAGEMENT STUDIES

(A unit of Maharaja Agrasen Technical Education Society)

Affiliated to GGSIP University; Recognized u/s 2(f) of UGC

Recognized by Bar Council of India; ISO 9001: 2015 Certified Institution

Tel. Office: 8448186947, 8448186950 www.maims.ac.in

Skill Enhancement Certificate Course

Data Analytics

13 August- 15 October, 2018

Report

Data Analytics is the need of the hour. In this dynamic & ever-changing environment, predicting the future has become more relevant, especially with the availability of enormous amounts of data. Excel & SPSS (Statistical Package for Social Sciences) are the prominent tools in data analytics. They help generate meaningful results from the data by the application of various statistical methods with ease. Many companies have now been looking for a skilled professional, who understands the research methodology, statistical techniques, data presentation & working on statistical software. Thus, it encouraged the seasoned faculty of MAIMS to design a skill enhancement course in data analytics using Excel & SPSS for final year students.

This Certification Course was started for all the students of MAIMS, Research scholars, faculty & undergraduate students across the country. The prime objective of the course was to equip the students with the basics of research methodology & various quantitative data analysis techniques. Excel & SPSS had been used to conduct various statistical tests and make an inference about the data. Specifically, the course covered in-depth lessons for advanced excel commands, formulas, charts/plots followed by descriptive analysis, parametric & nonparametric tests, correlation, regression, normality, and factor analysis. A total of 130 students completed the course. The course was of 30 hours, divided in 20 sessions of one & half hour each. Every session was followed with a practical assignment related to it. After the completion of the week (2 sessions), a feedback form was floated to get the viewpoint of the students. A total of 10 such feedback forms were filled by the students. The students were assessed based on the assignment submitted, MCQ test on Excel and MCQ test on SPSS.

Registrations were opened from August 6, 2018 and the venue for the event was Lab 1.



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It was a great learning experience for the students as well as for the faculty. The sessions were conducted by Prof. (Dr.) Vijay Kumar Khurana, Dr. Parul Kumar, Dr. Bharti Chaudhary, Mr. Sumedha Dutta, Ms. Shilpee Aggarwal, Ms. Preeti Bansal, Mr. Inderpal Singh, and Mr. Nakul Anand. Certificates were given only to such students who successfully qualified all the four parameters, namely, attendance, feedback forms, assignments, and quizzes.

The credit for this ambitious initiative goes to Prof.(Dr.) M. K Bhat, Director, MAIMS. Their constant support and encouragement helped in the successful accomplishment of this program.

***Convener – Dr. Bharti Chaudhary, Assistant Professor**

About the Course

Courses on research methodology are often well packed with methods and techniques of data analyses, ‘but’ with limited understanding of the logic underlying the various techniques, methods, and research design. Keeping this challenge in mind, the present course has been designed for students who are keen to do research & data analysis in the years to come. The students will learn how data analysts describe, predict, and make informed business decisions in the specific areas of marketing, human resources, finance, and operations. Analytics talent demand is much more than the available skilled supply. The students would be able to become employable in this fast-growing new age field by demonstrating the skills learnt through this course.

Excel & SPSS had been used to conduct various statistical tests and make an inference about the data. Specifically, the course covered in-depth lessons for advance excel commands, formulas, charts/plots followed by descriptive analysis, parametric & nonparametric tests, correlation, regression, normality, and factor analysis. Many companies have now been looking for a skilled professional, who understands the research methodology, statistical techniques, data presentation



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& working on statistical software. Thus, this course would build the data analysis skills among the students.

Objectives of the Course:

- Application of Research Methodology.
- Understanding of different types of data.
- Able to describe, predict & make informed decisions.
- Application in the specific areas of marketing, human resources, finance, and operations.
- Quantitative Data Analysis.

Course content:

This course is organized into 21 sessions as per details below:

S.No	Topic	Resource Person
1	Types of Data- Nominal, ordinal, ratio & interval	Prof. V.K. Khurana
2	Filter -Number and Text filters, data filters	Ms. Shilpee Aggarwal
3	Sorting -Sort by colour, reverse list and randomize list	Dr. Bharti Chaudhary
4	Conditional Formatting — Manage, rules, data bars, colour scales	Mr. Inderpal Singh
5	Use of Graphs — trend lines, Histogram, multiple axis graph	Ms. Bharti Chaudhary
6	Cleaning Data in Excel - removing, use of min & max	Ms. Sumedha Dutta
7	Data Screening through Descriptive Analysis	Mr. Nakul Anand
8	Tables — Structured references, table styles and quick analysis, duplicates	Ms. Preeti Bansal
9	Macros	Dr. Deepak Dagar
10	Frequency distribution	Ms. Shilpee Aggarwal
11	Pivot Table	Dr. Deepak Dagar
12	Hypothesis testing — t test and z test	Ms. Sumedha Dutta
13	ANOVA	Mr. Nakul Anand
14	Correlation & Regression	Ms. Preeti Bansal
15	Working in SPSS: Entering data, variable labels, value labels	Mr. Nakul Anand
16	Chart Creation Basics - box plot, histogram, PP plots	Mr. Inderpal Singh



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17	Descriptive Analysis & Crosstabulation	Ms. Shilpee Aggarwal
18	Mann Whitney Test, Wilcoxon test	Ms. Sumedha Dutta
19	T-test & ANOVA	Dr. Bharti Chaudhary
20	Correlation & Regression	Ms. Preeti Bansal

Course Outcomes:

- Students will be able to analyze and work with large data sets and make meaningful interpretations.
- Students will also be able to apply correct statistical tests on different types of data
- Students will be able to add value to their research projects.
- With advanced knowledge of Excel & SPSS, they can easily start their careers as research analysts or data analysts.

The certification course was conducted from August 13, 2018 to October 15, 2018 in MAIMS's campus. The duration of the course was 30 hours along with the two MCQ quizzes & 20 assignments. Each class consists of a one & a half hour session along with the videos, a practice exercise, a quiz, and a reference guide.



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Following is the criteria based on which students are eligible for the certification:

- Attending regular classes using a laptop.
- Submission of all Assignments.
- Participation in all Quizzes.
- Submission of the feedback form on a timely basis.

Total Sessions: 20 of 1.5 hour each

Total number of students completed the course: 130



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Top three positions were occupied by following students:

1. ARNAV GAUTAM 1514701718
2. ANKIT SEHGAL 44314701718
3. ADIT KHOSLA 40414788816