Maharaja Agrasen Institute of Management Studies
Department of Business Administration

Under the Aegis of IQAC

Skill Enhancement Certificate Course
Data Analytics- 1.0
31st May 2021

Report

Data Analytics is the need of an hour. In this dynamic & ever-changing environment, predicting the future has become more relevant, especially with the availability of enormous amount of data. Excel & SPSS (Statistical Package for Social Sciences) are the prominent tools in data analytics. They help generating 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 understand the research methodology, statistical techniques, data presentation & working on statistical software. Thus, it encouraged the seasoned faulty of MAIMS to design a skill enhancement course in data analytics using Excel & SPSS for final year students.

This Certification Course was the initiative taken under the aegis of IQAC in association with ThinkQuest Club for final year students of MAIMS. 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 advance excel commands, formulas, charts/plots followed by descriptive analysis, parametric & nonparametric tests, correlation, regression, normality and factor analysis. A total of 65 students enrolled in 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.

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, Dr. 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. Vijay Kr. Khurana (HOD, Business Administration) & his team, who worked under the able guidance of the Prof. Ravi Kumar Gupta. Director, MAIMS. Their constant support and encouragement helped in successful accomplishment of this program.The valedictory session of the certificate course was held on 22nd June 2021 and qualifying students were felicitated.

*Convener –Dr. Parul Kumar, Senior 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 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 understand the research methodology, statistical techniques, data presentation & 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 Outcomes:

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

Course content:

This course is organized into 20 sessions as per details below:

Lec. No.	Topics	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	Tables – Structured references, table styles and quick analysis	Ms. Preeti Bansal
6	Cleaning Data in Excel - removing duplicates, use of min & max	Dr. Sumedha Dutta
7	Data Screening through Descriptive Analysis	Mr. Nakul Anand
8	Use of Graphs – trend lines, Histogram, multiple axis graph	Dr. Bharti Chaudhary

9	Pivot Table	Dr. Parul Kumar
10	Frequency distribution	Ms. Shilpee Aggarwal
11	Hypothesis testing – t test and z test	Dr. Sumedha Dutta
12	ANOVA	Mr. Nakul Anand
13	Correlation & Regression	Ms. Preeti Bansal
14	Working in SPSS: Entering data, variable labels, value labels	Mr. Nakul Anand
15	Chart Creation Basics - box plot, histogram, PP plots	Mr. Inderpal Singh
16	Descriptive Analysis & Crosstabulation	Ms. Shilpee Aggarwal
17	Mann Whitney Test, Wilcoxon test	Dr. Sumedha Dutta
18	T-test & ANOVA	Dr. Bharti Chaudhary
19	Correlation & Regression	Ms. Preeti Bansal
20	Exploratory Factor Analysis	Dr. Parul Kumar

Course Implementation Summary

The certification course was conducted from 18 February 2021 to 30 May 2021 via the online platform of Google Meet. 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. Classes were scheduled for twice a week. Following are the criteria based on which students are eligible for the certification:

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

Total Sessions: 20 of 1.5 hour each
Total number of enrolled students: 65
Total number of students certified: 26

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Top Performers of the Course

Ms. Mehak Lonial
Bachelor of Business Administration
Enrolment No: 047147001718
Aggregate Score: 89.97%
(Cash Prize: INR 500/-)

Mr. Himanshu Dwivedi
Bachelor of Business Administration
Enrolment No: 40814701718
Aggregate Score: 86.68 %
(Cash Prize: INR 500/-)
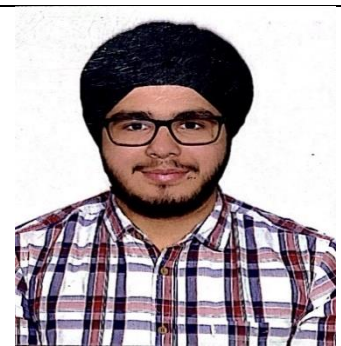
Mr. Manmeet Singh
Bachelor of Business Administration
Enrolment No: 40214701718
Aggregate Score :85.68 %
(Cash Prize: INR 500/-)
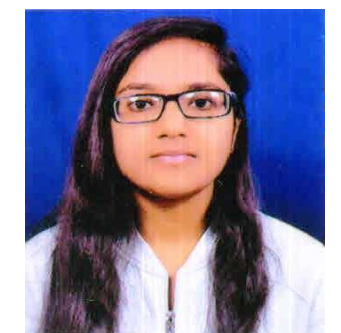
Ms. Kanika Jain
Bachelor of Business Administration
Enrolment No: 41814701718
Aggregate Score: 84.26 %

	Mr. Naman Rajput Bachelor of Business Administration Enrolment No: 5314701718 Aggregate Score: 82.10 %
	Ms. Tanisha Chadha Bachelor of Business Administration Enrolment No: 9014701718 Aggregate Score: 81.18 %
	Mr. MokshMarwah Bachelor of Business Administration Enrolment No: 4914701718 Aggregate Score: 81.09 %
	Ms. Yamini Bachelor of Business Administration Enrolment No: 10214701718 Aggregate Score: 80.43 %
	Mr. Tushar Aggarwal Bachelor of Business Administration Enrolment No:9314701718 Aggregate Score: 80.00 %

Glimpsesof the Event