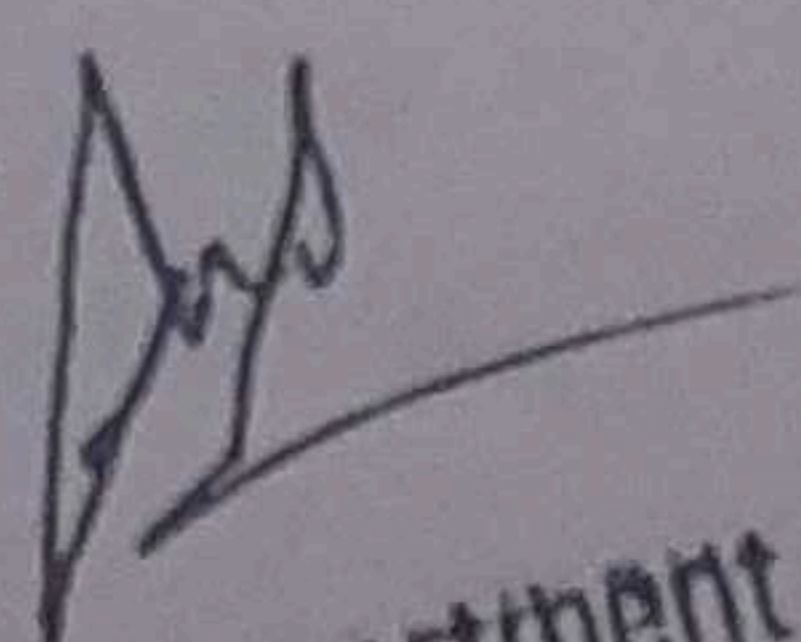
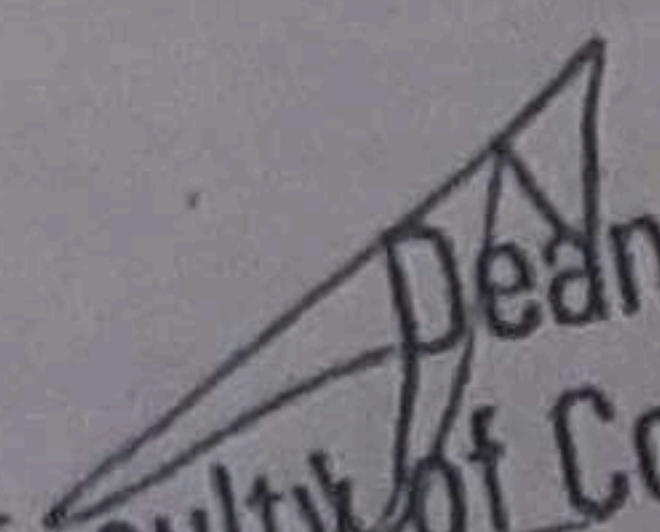


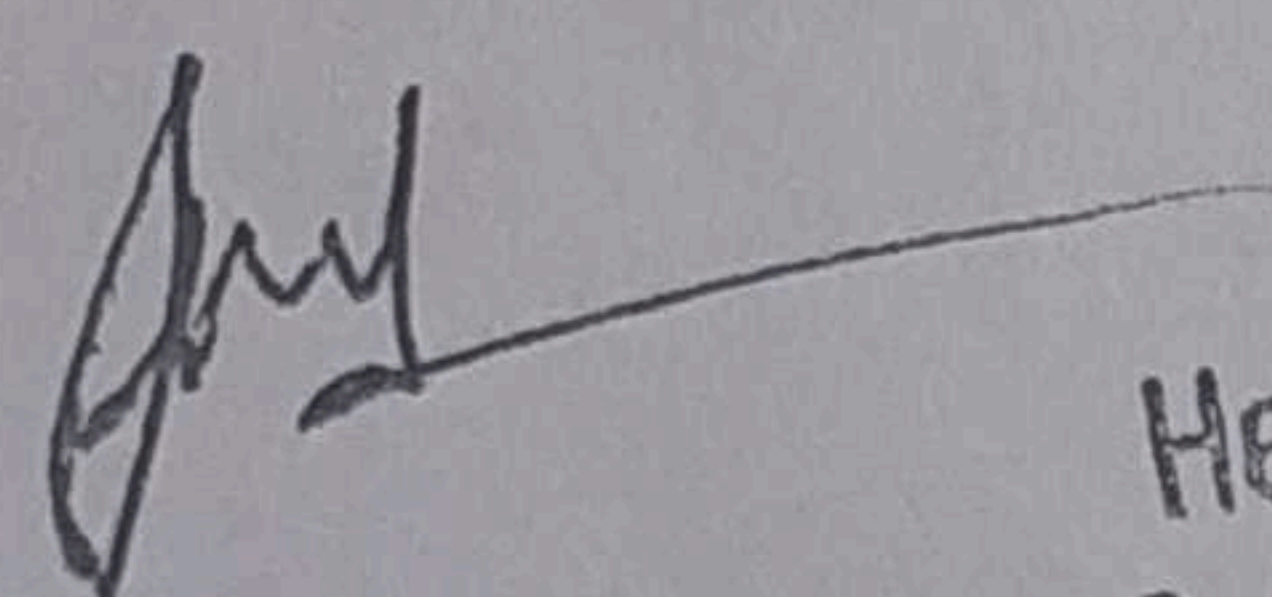
Type of Course: Value Added Course		
Course Code: VACA005	Title: Data Science	Duration:40hrs
Course offered to- MCA 1 <sup>st</sup> year	Course Coordinator: Mr. Saurabh Kumar	
Course Overview	This VAC(value added course) is offered by the Faculty of Computer Applications. It has 8 modules to complete this course, upon completion you will be awarded a Certificate. In this value added course students will learn how to extract insights from data using statistics and ML techniques, as well as data visualization skills. Students learn to work with popular analysis tools such as python and machine learning frameworks. This course is for all the students studying in the Faculty of Computer Applications. The following are the details.	
Course Prerequisites	Dedication to learn, Laptop with minimum i3 processor or better ,Comfort with learning mathematics and programming will be required, Understanding of Basic Python Programming Concept and Basics of Mathematics.	
Objectives	<ul style="list-style-type: none"> <li>• To provide a strong foundation about Data Science</li> <li>• To understand the use of statistics in data science</li> <li>• To Understand the essential concepts of basic probability</li> <li>• To understand concepts about types of data</li> <li>• To learn the fundamentals of Machine Learning.</li> <li>• To understand concepts of Supervised Learning</li> <li>• To understand basic component of an intelligence system.</li> <li>• To explore applications of Data science.</li> <li>• To understand different types of machine learning algorithms and tools.</li> <li>• To learn how to use machine learning model to solve real world problem.</li> </ul>	
Course Outcome	<ul style="list-style-type: none"> <li>• Apply the fundamentals of statistics on real world data</li> <li>• List various approaches of Machine Learning.</li> <li>• Use Data Science for personal use</li> <li>• Describe machine learning algorithms to solve the real-world problems.</li> <li>• Develop machine learning models.</li> <li>• Classify data using Logistic regression</li> <li>• Identify appropriate models for solving machine learning problems.</li> <li>• Use of statistical tools to analyze and interpret data accurately</li> <li>• To make informed decisions based on the data</li> </ul>	
Module No.	Module Title	No. of hours (per module)
Module I	Overview of AI, M & DS	2
Introduction to Data Science, Machine Learning and AI, Overlap between Data Science, Machine Learning and AI, Applications of Data Science in day to day life		
Module II	Basic understanding about Data	2
Data, Types of data: Structured Data, Semi structured data, Unstructured data, presence noise of data		
Module III	Fundamentals of Statistics	5

  
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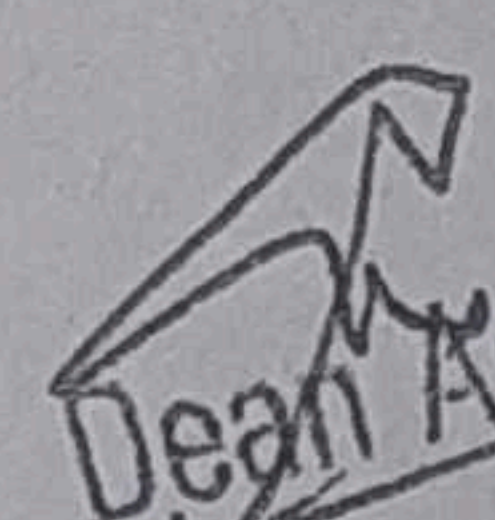
  
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Introduction, Descriptive Statistics: Mean, Mode, Median, variance, standard deviation, Normal distribution, Binomial Distribution, Sampling, correlation, outliers, Hypothesis testing, P-Value		
<b>Module IV</b>	<b>Fundamentals of Probability</b>	<b>6</b>
Definition, Important concepts of probability theory including random variables and independence, independent events, mutually exclusive events, collectively exhaustive events, conditional probability, Bayes Theorem, Discrete probability distribution.		
<b>Module V</b>	<b>Foundation of Linear Algebra</b>	<b>4</b>
Introduction to linear algebra, notations and definitions, Operations on matrices: additions, subtraction, multiplication, scalar multiplication, vector multiplication, Matrix inversion, transformation,		
<b>Module VI</b>	<b>Python Libraries Required For Data Science</b>	<b>7</b>
<b>Numpy:</b> key operations using numpy, <b>Pandas:</b> key operations on Data Frames, <b>Matplotlib:</b> Visualizing data, creating graphs		
<b>Module VII</b>	<b>Supervised Learning and Linear Regression</b>	<b>7</b>
Difference between supervised, unsupervised and semi-supervised learning and Reinforcement learning, Linear Regression, Loss function, Method of gradient descent		
<b>Module VIII</b>	<b>Classification and Logistic Regression</b>	<b>7</b>
Introduction to classification problems and Types of classification - Binary Classification, Multi-Class Classification, Logistic Regression		
<b>Text Books</b>	1. Introduction to Machine Learning with Python: A Guide for Data Scientists, Andreas C. Müller and Sarah Guido, O'Reilly, 2016.	
<b>Reference Books</b>	1. Python Cookbook, 3rd Edition by David Beazley (Author), Brian K. Jones (Author)	
<b>Mode of Evaluation</b>	Quizzes, Class Test	

  
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## Department of Computer Applications

02 Jan 2022

### CIRCULAR

#### VALUE ADDED COURSE (Data Science)- MCA

Students of MCA 1<sup>st</sup> year are hereby informed that value added course “Data Science” is scheduled from 7<sup>th</sup> February 2022 in your respective classroom, Academic Block-III.

#### Schedule:

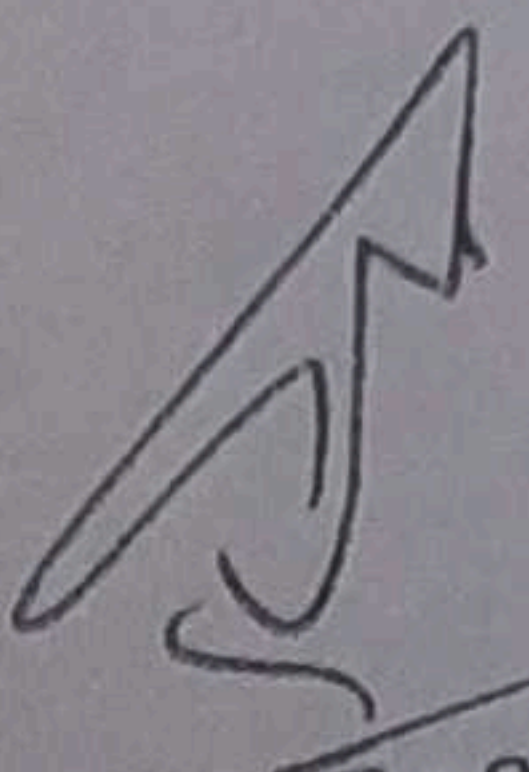
- Time Slot: 03:00 PM to 05:00 PM
- Key Speaker: Mr. Saurabh Kumar
- Duration: 2 hrs

#### Program Overview:

The objective of this course is to develop python skills of students who are ready to deal with complexities in the computing world and are able to maintain data science skills as per the requirement.

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Mr. Jitendra Choudhary  
(HOD)

  
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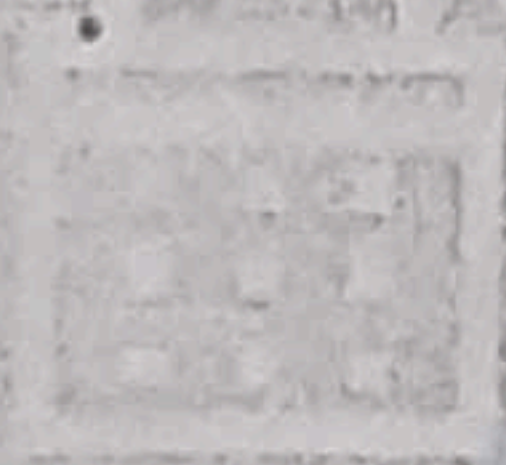
  
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# Data Science

  
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**Organised By:**

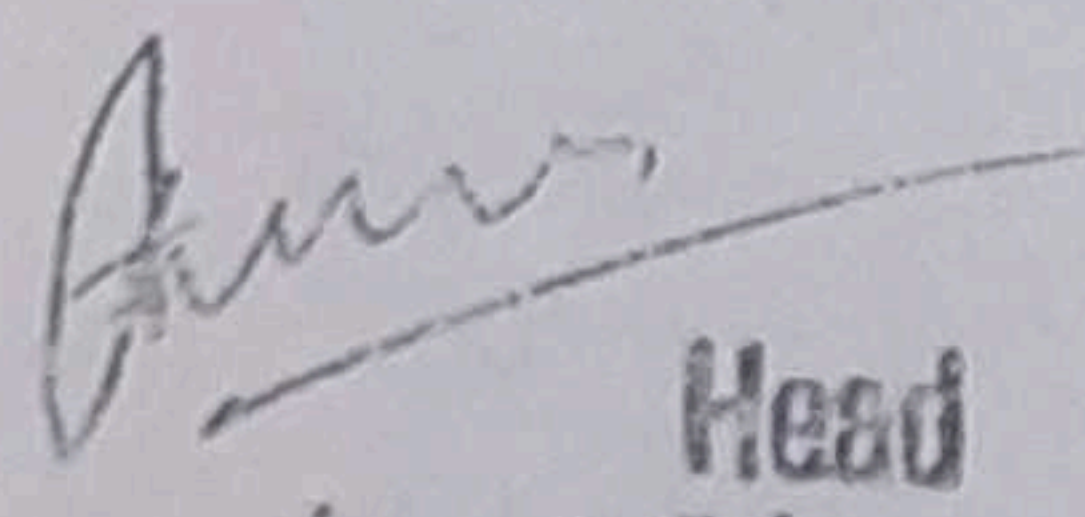
**FACULTY OF  
COMPUTER  
APPLICATIONS**



**DATE**  
7 Feb - 7 March 2022



**TIME**  
03 PM TO 05 PM

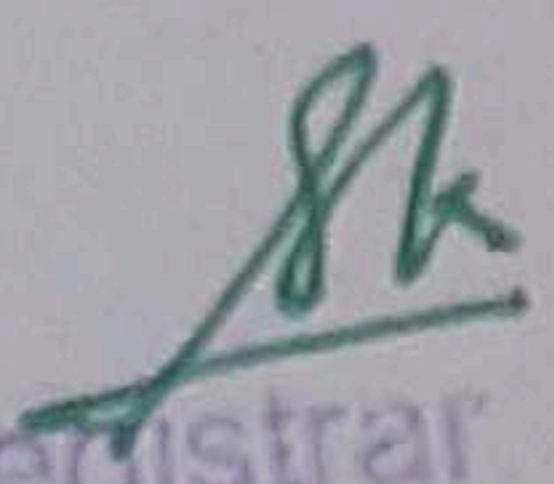
**HOD:** 

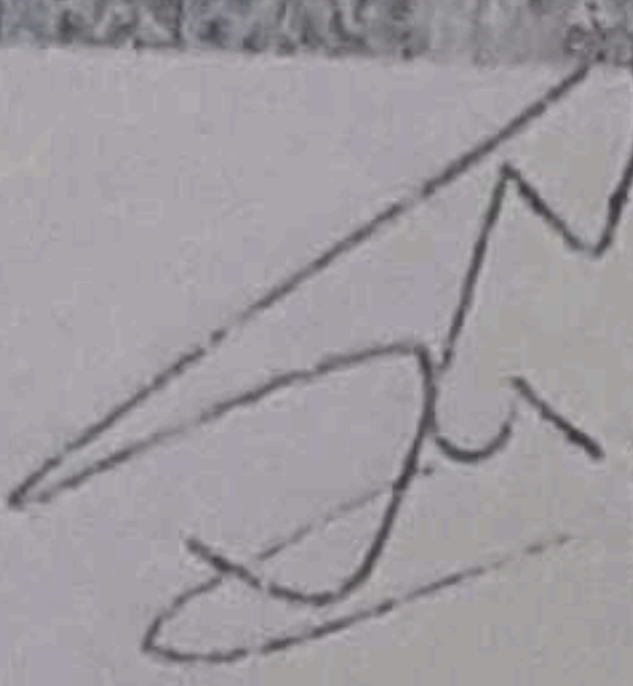
Head

Mr. Jitendra Kumar  
Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (UP)

**Speaker:**

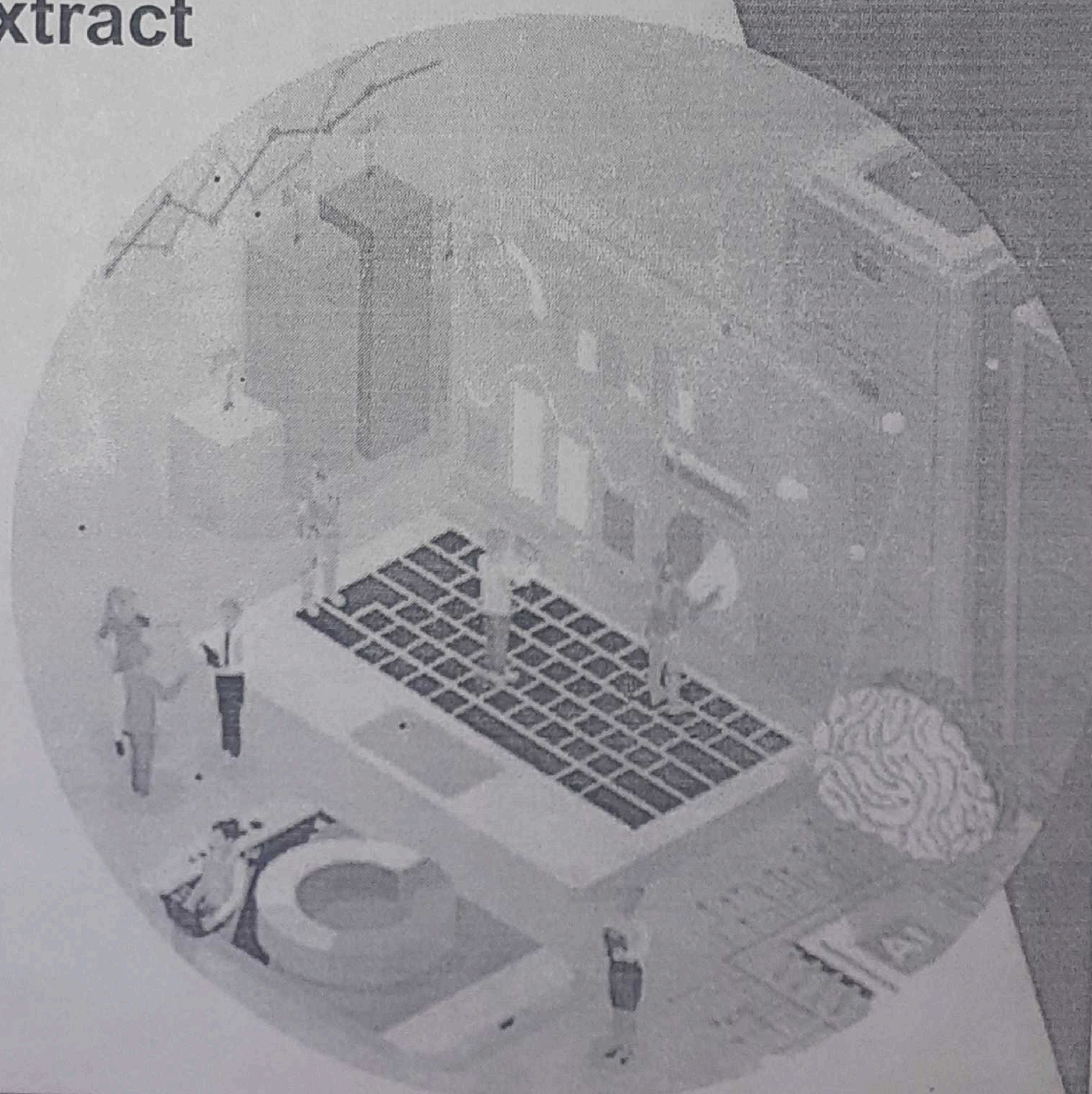
Mr. Saurabh Kumar

  
Registrar  
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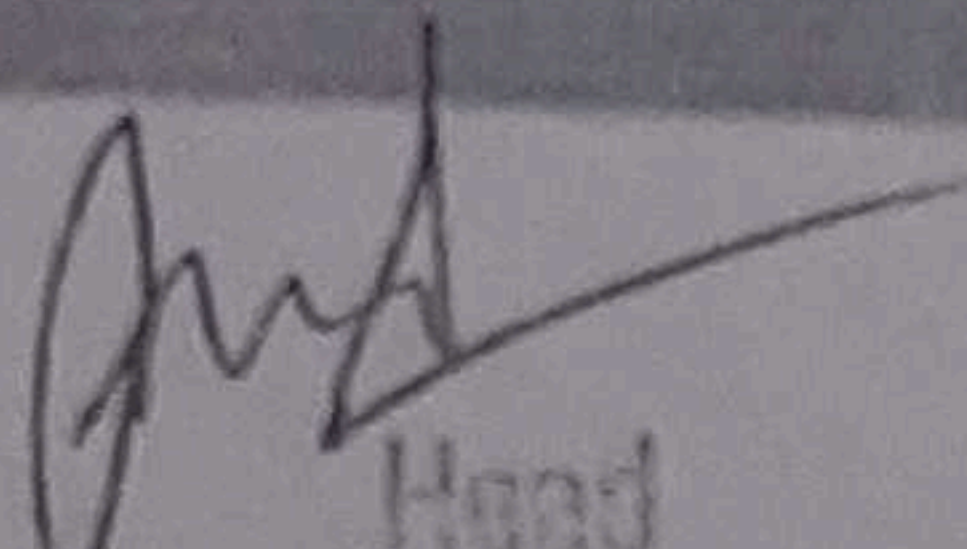
  
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# COURSE OVERVIEW

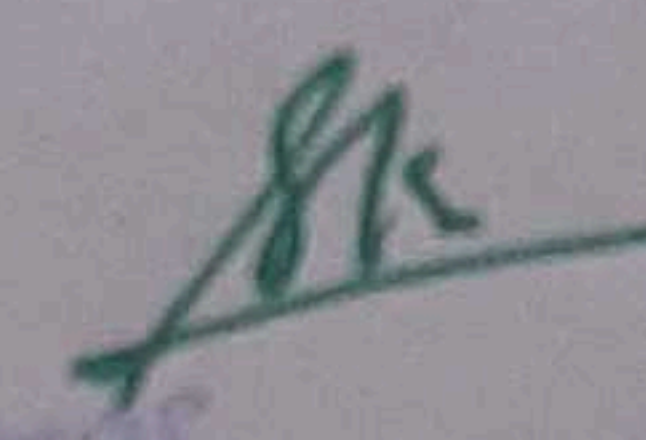
This course teaches students how to visualise data and extract insights from it using statistics and machine learning approaches. Students also gain experience working with well-known analysis tools including Python and machine learning frameworks.




**HOD**  
**MR. JITENDRA CHOUDHARY**

  
Head  
Department of Computer Applications  
Faculty of Computer Applications  
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**SPEAKER**  
**MR. SAURABH KUMAR**

  
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**Value Added Course**  
**Course - Data Science**  
**Course Code - VACA005**  
**Duration - 40 hrs**

Month February

S.No	Name	Course	Student ID	Year	7	8	9	10	11	14	15	16	17	18	21	22	23	24	25	28	2	3	4	7	
1	SUMIT KUMAR	MCA	MC2021006	2021-22	P	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	
2	AVISHEK KUMAR GUPTA	MCA	MC2021007	2021-22	A	P	P	P	A	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P
3	UDIT BAJPAI	MCA	MCA2021008	2021-22	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
4	ABHAY MISHRA	MCA	MCA2021009	2021-22	P	P	P	A	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P
5	ARUN KUMAR	MCA	MCA2021010	2021-22	P	P	P	P	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P
6	AMIT KUMAR SHAIH	MCA	MCA2021011	2021-22	P	P	P	P	P	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P
7	PRIYANKA GANGWAR	MCA	MCA2021012	2021-22	A	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P
8	ABHISHEK KUMAR	MCA	MCA2021013	2021-22	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P
9	AKSHAY KUMAR	MCA	MCA2021015	2021-22	P	A	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P
10	AAFTAB AALAM	MCA	MCA2021016	2021-22	P	P	P	P	P	P	P	P	A	P	P	A	P	P	P	P	P	P	P	P	P
11	ASAD KHAN	MCA	MCA2021017	2021-22	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A
12	SAKSHI SAINI	MCA	MCA2021018	2021-22	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
13	PRANAV KATIYAR	MCA	MCA2021019	2021-22	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P
14	AJEET SINGH	MCA	MCA2021020	2021-22	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P
15	AMAN SINGH	MCA	MCA2021021	2021-22	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P
16	DIVYA SINGH	MCA	MCA2021022	2021-22	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	A
17	ANKIT	MCA	MCA2021023	2021-22	P	P	P	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	A
18	ANKUL PANDAY	MCA	MCA2021024	2021-22	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	A
19	MOHD ADNAN ANSARI	MCA	MCA2021025	2021-22	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P
20	PAWAN KUMAR	MCA	MCA2021026	2021-22	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
21	MOHAMMAD IMRAN KHAN	MCA	MCA2021027	2021-22	P	P	P	P	P	A	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P
22	PRIYA SHARMA	MCA	MCA2021028	2021-22	P	P	P	P	A	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	A
23	RAMAKANT	MCA	MCA2021029	2021-22	P	P	P	P	P	P	P	P	P	A	P	P	P	P	A	P	P	P	P	P	P
24	AVINASH KUMAR SINGH	MCA	MCA2021030	2021-22	P	P	P	P	P	P	P	A	P	P	P	P	P	P	A	P	P	P	P	P	P
25	DEEPAK	MCA	MCA2021031	2021-22	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	A
26	NEERAJ KUMAR	MCA	MCA2021032	2021-22	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P
27	GAURAV KALKHURIYA	MCA	MCA2021033	2021-22	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P
28	AKHILESH YADAV	MCA	MCA2021034	2021-22	P	P	A	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P
29	SAURABH VERMA	MCA	MCA2021035	2021-22	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	A
30	ABHISHEK PATHAK	MCA	MCA2021036	2021-22	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P
31	CHITRANSHI	MCA	MCA2021037	2021-22	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
32	SAKSHI VERMA	MCA	MCA2021038	2021-22	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P
33	PRAGATI MISHRA	MCA	MCA2021039	2021-22	A	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P
34	JEESHAN ALI	MCA	MCA2021040	2021-22	P	P	P	P	P	P	P	P	A	P	P	P	P	P	A	P	P	P	P	P	A
35	VISHAL SAHU	MCA	MCA2021041	2021-22	P	P	A	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
36	KAMLESH GUPTA	MCA	MCA2021042	2021-22	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	A	P	P	P	P	A
37	RIDHIMA SHARMA	MCA	MCA2021043	2021-22	P	P	P	P	P	P	P	P	P	A	P	P	P	P	P	P	P	P	P	P	P
38	SACHIN KUMAR	MCA	MCA2021044	2021-22	P	P	P	P	P	P	P	P	P	A	P	P	P	P	A	P	P	P	P	P	P
39	ZEESHAN	MCA	MCA2021045	2021-22	P	P	P	P	P	P	P	P	P	P	A	P	P	P	A	P	P	P	P	P	A

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## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Sumit Kumar  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course \_\_\_\_\_  
**DATA SCIENCE**  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

  
Head of the Department

Department of Computer Applications  
Faculty of Computer Applications  
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Course Coordinator

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Faculty of Computer Applications  
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This Certificate is awarded to Mr./Ms. Avishhek Kumar Gupta  
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This Certificate is awarded to Mr./Ms. Udit Baipai  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
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Faculty of Engineering & Technology  
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This Certificate is awarded to Mr./Ms. Abhay Mishra  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
DATA SCIENCE  
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## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Arun Kumar  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
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offered by Department of COMPUTER APPLICATIONS  
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This Certificate is awarded to Mr./Ms. Amit Kumar Shah  
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for successfully completing a value added course DATA SCIENCE  
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## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Abhishek Kumar  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
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offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

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Head

Department of Computer Applications  
Faculty of Computer Applications  
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Abhishek Kumar

II SEMESTER

DATA SCIENCE

COMPUTER APPLICATIONS

07 February 2022- 07 March 2022

Course Coordinator

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## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Akshay Kumar  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

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Head  
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Course Coordinator

  
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## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Aaftab Alam  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course \_\_\_\_\_  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

Head of the Department

*[Signature]*  
Head  
Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (U.P.)

Course Coordinator

*[Signature]*  
Registrar  
Invertis University  
Bareilly

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## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Asad Khan  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

Head of the Department  
Head

Department of Computer Applications  
Faculty of Computer Applications  
Inverdis University, Bareilly (UP)

Course Coordinator

Inverdis University  
Bareilly

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Faculty of Computer Applications  
Inverdis University, Bareilly (UP)

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## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Sakshi Saini  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

Head of the Department

Head  
Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly

Course Coordinator

Registrar  
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## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Pranav Katiyar  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

Head of the Department

Head  
Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (UP)

Course Coordinator

Dean  
Faculty of Computer Applications  
Invertis University, Bareilly (UP)

Registrar  
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## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Ajeet Singh  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

Head of the Department

Head  
Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly

Course Coordinator


Registrar  
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Bareilly

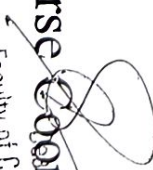
Dean Academics  
Faculty of Computer Applications  
Invertis University, Bareilly (UP)

# INVERTIS UNIVERSITY

## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Aman Singh  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

  
Head of the Department  
Head  
Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (UP)

  
Course Coordinator  
Registrar  
Faculty of Computer Applications  
Invertis University, Bareilly (UP)

# INVERTIS UNIVERSITY


## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Divya Singh  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

  
Head of the Department

Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (U.P.)

  
Course Coordinator

  
Registrar  
Invertis University  
Bareilly

Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (U.P.)

# INVERTIS UNIVERSITY


## CERTIFICATE OF VALUE ADDED COURSE


This Certificate is awarded to Mr./Ms. Ankit  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

Head of the Department

  
Head  
Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (U.P.)

Course Coordinator.

  
Registrar  
Invertis University  
Bareilly

  
Dean Academics  
Faculty of Computer Applications  
Invertis University, Bareilly (U.P.)





# INVERTIS UNIVERSITY

## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Mohd Adnan Ansari  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

Head of the Department

Course Coordinator

Registrar  
Invertis University

Registrar  
Invertis University

# INVERTIS UNIVERSITY

## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Pawan Kumar  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

  
Head of the Department

Head  
Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (U.P.)

  
Course Coordinator

Registrar  
Invertis University  
Bareilly

Dean Academics  
Faculty of Computer Applications  
Invertis University, Bareilly (U.P.)

# INVERTIS UNIVERSITY

## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Mohammad Imran Khan  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

  
Head of the Department

Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (U.P.)

  
Course Coordinator

Registrar  
Invertis University  
Bareilly


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## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Ramakant  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

  
Head of the Department

Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (UP)

  
Course Coordinator

  
Registrar  
Invertis University  
Dean Academics  
Faculty of Computer Applications

# INVERTIS UNIVERSITY

## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Avinash Kumar Singh

of Program MCA Year/Semester II SEMESTER


for successfully completing a value added course DATA SCIENCE


offered by Department of COMPUTER APPLICATIONS

during 07 February 2022- 07 March 2022

Head of the Department

Course Coordinator

  
Head  
Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (U#2)

  
Dean Academics  
Faculty of Computer Applications  
Invertis University, Bareilly (U#2)

# INVERTIS UNIVERSITY

## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Deepak  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

Head of the Department

Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (UP)

Course Coordinator

Dean Academics  
Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (UP)

Registrar  
Invertis University

Bareilly



# INVERTIS UNIVERSITY


## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Neeraj Kumar  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

  
Head of the Department

Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (U?)

  
Course Coordinator

  
Registrar  
Invertis University  
Bareilly

Faculty of Computer Applications  
Invertis University, Bareilly (U?)




# INVERTIS UNIVERSITY


## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Akhilesh Yadav  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022-07 March 2022

Head of the Department

  
Head  
Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (UP)

Course Coordinator

  
Dean Academics  
Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (UP)


  
Registrar  
Invertis University  
Bareilly

# INVERTIS UNIVERSITY


## CERTIFICATE OF VALUE ADDED COURSE


This Certificate is awarded to Mr./Ms. Saurabh Verma  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course \_\_\_\_\_  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

Head of the Department

  
Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (UP)

Course Coordinator

  
Registrar  
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Bareilly

  
Dean Academics  
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Invertis University, Bareilly (UP)

# INVERTIS UNIVERSITY

## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Abhishek Pathak  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course \_\_\_\_\_  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

Head of the Department

Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (UP)

Course Coordinator

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Faculty of Computer Applications  
Invertis University, Bareilly (UP)

Registrar

Invertis University  
Bareilly

# INVERTIS UNIVERSITY

## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Chitransh  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

  
Head of the Department

Head  
Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly 112

  
Course Coordinator

Dean Academics  
Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly 112

# INVERTIS UNIVERSITY

## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Sakshi Verma

of Program MCA Year/Semester II SEMESTER

for successfully completing a value added course

DATA SCIENCE

offered by Department of COMPUTER APPLICATIONS

during 07 February 2022- 07 March 2022

Head of the Department

Course Coordinator

Dean Academics  
Faculty of Computer Applications  
Invertis University, Bareilly

Registrar  
Invertis University  
Bareilly

# INVERTIS UNIVERSITY

## CERTIFICATE OF VALUE ADDED COURSE


This Certificate is awarded to Mr./Ms. Pragati Mishra  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course \_\_\_\_\_


DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

  
Head of the Department

Head  
Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (UP)

  
Course Coordinator

  
Registrar  
Invertis University  
Bareilly

  
Head of Department  
Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (UP)



# INVERTIS UNIVERSITY

## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Jeeshan Ali  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course \_\_\_\_\_  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

Head of the Department

Head  
Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (UP)

Course Coordinator

Dean Academics  
Faculty of Computer Applications  
Invertis University, Bareilly (UP)

Registrar  
Invertis University

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**CERTIFICATE OF VALUE ADDED COURSE**

This Certificate is awarded to Mr./Ms. Vishal Sahu  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course \_\_\_\_\_  
**DATA SCIENCE**  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

  
Head of the Department

Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly-1177


  
Course Coordinator

  
Registrar  
Faculty of Computer Applications  
Invertis University, Bareilly (UP)

# INVERTIS UNIVERSITY

## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Kamlesh Gupta  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course \_\_\_\_\_  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

  
Head of the Department  
Department of Computer Applications  
Faculty of Computer Applications,  
Invertis University, Bareilly (UP)

  
Course Coordinator  
Dean Academics  
Faculty of Computer Applications,  
Invertis University, Bareilly (UP)

  
Faculty

# INVERTIS UNIVERSITY

## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Ridhima Sharma  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

Head of the Department

Head  
Department of Computer Applications  
Faculty of Computer Applications  
invertis University, Bareilly (UP)

Course Coordinator

Dean Academics  
Faculty of Computer Applications  
Invertis University, Bareilly (UP)

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## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Sachin Kumar  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

Head of the Department

Head  
Department of Computer Applications  
Faculty of Computer Application  
Invertis University, Bareilly

Course Coordinator

Registrar  
Invertis University  
Dean Academics  
Faculty of Computer Applications  
Invertis University, Bareilly

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## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Zeshan  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

Head of the Department

Department of Computer Applications  
Faculty of Computer Application  
Invertis University, Bareilly (U.P.)

Course Coordinator

Registrar  
Invertis University

Dean Academics  
Faculty of Computer Application  
Invertis University, Bareilly (U.P.)

# INVERTIS UNIVERSITY


## CERTIFICATE OF VALUE ADDED COURSE


This Certificate is awarded to Mr./Ms. Anuj Bharti  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course \_\_\_\_\_  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

  
Head of the Department

Head  
Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (UP)

  
Course Coordinator

  
Registrar  
Invertis University  
Bareilly

  
Dean Academics  
Faculty of Computer Applications

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## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. \_\_\_\_\_

Monika Singh

of Program MCA Year/Semester \_\_\_\_\_

II SEMESTER

for successfully completing a value added course \_\_\_\_\_

DATA SCIENCE

offered by Department of \_\_\_\_\_ COMPUTER APPLICATIONS

during \_\_\_\_\_ 07 February 2022- 07 March 2022

Head of the Department

Course Coordinator

Head

Department of Computer Applications

Faculty of Computer Applications

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Registrar

Invertis University

Bareilly

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Faculty of Computer Applications



**INVERTIS UNIVERSITY**  
**CERTIFICATE OF VALUE ADDED COURSE**

This Certificate is awarded to Mr./Ms. Anshika Gupta  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course \_\_\_\_\_  
**DATA SCIENCE**  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

Head of the Department

Head  
Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (U.P.)

Course Coordinator

Registrar  
Dean Academics  
Faculty of Computer Applications  
Invertis University, Bareilly (U.P.)

# INVERTIS UNIVERSITY

## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Mohammad Danish  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

Head of the Department

Head  
Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (U/2)

Course Coordinator


Dean Academics  
Faculty of Computer Applications  
Invertis University, Bareilly (U/1)

Invertis University  
Bareilly

# INVERTIS UNIVERSITY


## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Princi Sharma  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

  
Head of the Department

Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly

  
Course Coordinator

  
Registrar  
Invertis University  
Bareilly

Department of Computer Applications  
Faculty of Computer Applications  
Invertis University  
Bareilly

# INVERTIS UNIVERSITY

## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Akash Verma  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course \_\_\_\_\_  
**DATA SCIENCE**  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

  
Head of the Department

Department of Computer Applications

Faculty of Computer Applications

In: 61511, Bareilly (U.P.)

  
Course Coordinator

Registrar

Invertis University

Bareilly

Dean Academics

Faculty of Computer Applications

Invertis University, Bareilly (U.P.)

# INVERTIS UNIVERSITY

## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Atul Kumar  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course \_\_\_\_\_  
**DATA SCIENCE**  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

  
Head of the Department

Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (UP)

  
Course Coordinator

# INVERTIS UNIVERSITY

## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Nitesh Kaushik  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course \_\_\_\_\_


### DATA SCIENCE

offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

  
Head of the Department

Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (U.P.)

  
Course Coordinator

  
Registrar  
Invertis University  
Bareilly

# INVERTIS UNIVERSITY

## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Devsh Raghuvanshi  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

Head of the Department

Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (Uz)

Course Coordinator

Registrar  
Invertis-Univers  
Bareilly

Dean Academics  
Faculty of Computer Applications  
Invertis University, Bareilly (Uz)

# INVERTIS UNIVERSITY


## CERTIFICATE OF VALUE ADDED COURSE


This Certificate is awarded to Mr./Ms. Megha Saxena  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

  
Head of the Department

  
Course Coordinator

Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (UP)

  
Registrar  
Invertis University  
Bareilly

  
Dean Academics  
Faculty of Computer Applications  
Invertis University, Bareilly (UP)



# INVERTIS UNIVERSITY

## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Amir Husain  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course \_\_\_\_\_  
**DATA SCIENCE**  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

Head of the Department

Head  
Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (U.P)

Course Coordinator

Registrar  
Invertis University  
Bareilly

Dean Academics  
Faculty of Computer Applications  
Invertis University, Bareilly (U.P)

# INVERTIS UNIVERSITY

## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. Sachin  
of Program MCA Year/Semester II SEMESTER  
for successfully completing a value added course \_\_\_\_\_  
DATA SCIENCE  
offered by Department of COMPUTER APPLICATIONS  
during 07 February 2022- 07 March 2022

  
Head of the Department

Head

Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly (U.S)

  
Course Coordinator

  
Registrar

Invertis University, Bareilly (U.S)

Bareilly

# INVERTIS UNIVERSITY

## CERTIFICATE OF VALUE ADDED COURSE

This Certificate is awarded to Mr./Ms. \_\_\_\_\_

**Vikky**

of Program **MCA** Year/Semester \_\_\_\_\_

**II SEMESTER**

for successfully completing a value added course \_\_\_\_\_

**DATA SCIENCE**

offered by Department of **COMPUTER APPLICATIONS**

during **07 February 2022- 07 March 2022**

Head of the Department

Head

Department of Computer Applications  
Faculty of Computer Applications  
Invertis University, Bareilly

Course Coordinator

Registrar  
Invertis University  
Bareilly

Dean Academics  
Faculty of Computer Applications  
Invertis University, Bareilly