

**CENTRE FOR SKILL DEVELOPMENT & ENTREPRENEURSHIP  
AND  
UNIVERSITY INSTITUTE OF APPLIED MANAGEMENT SCIENCES  
PANJAB UNIVERSITY  
CHANDIGARH**



**CSDE Skill Enhancement Course  
Data Science and Artificial Intelligence Bootcamp using Python**

**ABOUT**

Technology is fast becoming a vital element in the present dynamic world. Everything from education to business is steered by technology. Several previously manually conducted tasks are being automated, leading to efficient and seamless operations and services. However, technology is known to generate vast amounts of data. Over the next five years up to 2025, global data creation is projected to grow to more than 180 zettabytes.<sup>1</sup> A number of novel fields have emerged, all reliant on data and its ever-growing importance. Among them, one of the most upcoming is data science. Data collection, interpretation, and analysis have always been central to decision-making. Our comprehensive Course, steered by expert academicians and practitioners, empowers you with the knowledge and skills to unravel the analytical side of decision-making. Join us and unlock the immense potential of data science today!

**LEARNING OUTCOMES**

After the successful completion of the Course, you will be able to:

- *Gather, organise and analyse* data to find meaning in numbers
- *Cultivate* a data mindset for better problem-solving
- *Harness* data for decision-making and communication
- *Diagnose and prevent* common pitfalls in data analysis and visualisation

**ELIGIBILITY AND SEATS**

Open to **MBA (Sectoral) Programme Semester III students of the University Institute of Applied Management Sciences**. It is **mandatory for all participants to bring their own laptops to ensure an optimal learning experience**. The Course has a maximum capacity of **35** participants.

**TARGET AUDIENCE**

This Course is designed for students who aspire to:

- critically look, interpret and visualise data
- boost problem-solving skills
- make informed and improved decisions using data
- apply data analytics skills to everyday life

**VENUE AND DURATION**

**Venue:** Conference Hall 101, University Institute of Applied Management Sciences, Panjab University, Sector-25, Chandigarh- 160014 ([Directions](#))

**Duration:** August 21-25, 2023

<sup>1</sup> <https://www.statista.com/statistics/871513/worldwide-data-created/>

## SCHEDULE

This intensive Course is of 30 hours. The sessions will be held from Monday to Friday, as per the following schedule:

Lecture and Practice	5 days × 4 sessions/day
Evaluation	Learning by Doing (LbD) activities/Quiz

## ASSESSMENT AND CERTIFICATION

Assessment will be out of **50 marks** based on performance in various modules. **Attendance** and **evaluation tasks** are an integral part of the Course. Only upon successful completion of this Course, will participants receive a certificate.

## MODULES

Module	Contents	Duration (hours)	Marks
1	Basic Concepts and Terminology	4.5	8
2	Python Fundamentals and Supporting Libraries	4.5	8
3	Data Preprocessing and Visualisation	4.5	8
4	Supervised Learning Techniques	4.5	9
5	Unsupervised Learning Techniques	3.0	6
6	AI Tools and Applications	6.0	11

In addition, 30 minutes will be devoted to 'daily reflections' from Tuesday through Friday.

## RESOURCE PERSONS

1. Dr. Akashdeep, Department of Computer Science and Engineering, University Institute of Engineering & Technology, Panjab University, Chandigarh.
2. Dr. Amit Doegar, Department of Computer Science and Engineering, National Institute of Technical Teachers Training & Research (NITTTR), Chandigarh.
3. Dr. Mamta Juneja, Department of Computer Science and Engineering, University Institute of Engineering & Technology, Panjab University, Chandigarh.
4. Prof. Sarabjeet Singh, Department of Computer Science and Engineering, University Institute of Engineering & Technology, Panjab University, Chandigarh.

## ORGANISERS

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