



SLC (University of Delhi)
Centre for Skill Development
SHORT TERM /ADD ON COURSES



**CERTIFICATE COURSE IN ARTIFICIAL INTELLIGENCE AND
MACHINE LEARNING**

About the Course:

It was started by Centre for Skill Development (CSD) in year 2020-21 under in collaboration National Institute of Electronics & Information Technology (NIELIT), an Autonomous Scientific Society under the administrative control of Ministry of Electronics & Information Technology (MoE&IT), Government of India. The Objective is to develop the skills in Machine Learning and Deep Learning technologies for development AI applications using Python Programing and Data Analytics packages. After successful completion of this Course, students will be able to:

- Develop Python programming language skills required for Data Analytics and Machine Learning
- Able to use Descriptive & Inferential Statistics concepts in Data Analysis and Predictive Modelling
- Able to Analyse and Process the data using Numpy and Pandas Libraries
- Able to do Data Visualization using Pandas, Matplotlib, Seaborne, Plotly and Cufflinks

Eligibility Criteria:

1. Minimum eligibility is 10+2 with Math and with 45% aggregate.

Or

2. Graduates from any recognized universities are also eligible.

Course Details:

1. 2 Months (2 hours Class to be held thrice a week).
2. National Institute of Electronics & Information Technology (NIELIT) (An Autonomous Scientific Society under the administrative control of Ministry of Electronics & Information Technology (MoE&IT), Government of India).
3. Minimum number of students in each batch of course: 20

Maximum number of students in each batch of course: 50

Important Dates:

Registration begins in the last week of May every year.

Commencement of course: First week of September.

Registration details:

The non-refundable registration fee of INR 100/- is to be made at

A/c Name: SHYAM LAL COLLEGE MISCELLANEOUS A/C

A/c No. : 1247800135

IFSC Code: CBIN0283941

MICR Code: 110016147

Bank: Central Bank of India

Documents required at the time of registration:

1. Copy of class 12th mark sheet or Graduation Degree/Mark sheet.
2. Screenshot of payment of registration fee of INR 100/-.

Link to register: <http://bit.ly/Add-ouncourses23>

Fee Structure:

INR 4000/- (including GST) for 2 months.

Guidelines:

1. Admission is on a First come First Serve Basis for the students meeting the eligibility criteria.
2. Online Registration Forms and details are available on the college website.
3. One-time registration fee of INR100/- is payable for Registration (non-refundable).
4. Students may enroll in two short-term courses at the same time, as well as any one Certificate/Diploma/Advanced Diploma course in addition to one short-term course.
5. Students who are willing to do more than one course must fill out a separate form for each course opted (**registration fee needs to be paid only once**).
6. For any query Email us at csd@shyamlal.du.ac.in
7. Classes for the courses will be conducted in physical mode at Shyam Lal College, from 2:00 PM onwards.
8. An amount of INR1000/- will be deducted if admission is cancelled. No refund will be allowed after July 31, 2024.

Note: Commencement of a course is subject to admission of minimum number of students.

After registration, candidates shortlisted for admission will be notified of further admission details on their registered email addresses through the official CSD email address: csd@shyamlal.du.ac.in within 15 days of submitting online registration form.

Course Curriculum

Certificate Course in AI and Machine Learning

Duration (In Hours): 30 Hours/3 Weeks (@ 2 hours Daily)

Course contents

Unit 1: Artificial Intelligence

Introduction to Artificial Intelligence (AI), Current Trends & Terminologies in AI, Applications and Challenges in AI.

Unit 2: Python Programming

Introduction to Python, Python Data types, Statements & expressions, Flow control & loops, Lists, and dictionaries.

Unit 3: Exploratory Data Analysis

Numpy Library: Array types, Array slicing, Universal functions, Aggregations, N-Dimensional arrays, sorting arrays, loading data in Numpy from various formats.

Pandas Library: Pandas objects – Series and Data frames, Data indexing and selection, NaN objects, Manipulating Data Frames, Grouping, filtering.

Visualizations with Matplotlib Library using various charts such as Bar Graphs, Histogram, Scatter Plot, Area Plot, Pie Chart.

Feature Engineering: Numeric & Categorical features, Normalization, Min Max Scaling, Standardization, Imputation.

Unit 4: Machine Learning

Introduction to Machine Learning, Algorithm types of Machine learning, Supervised Learning – Classification with Logistic Regression, Regression with Linear Regression, Unsupervised Learning – Clustering with K-Means.