MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY

Autonomous Institution – UGC, Govt. of India

(Affiliated to JNTU, Hyderabad, Approved by AICTE - Accredited by NBA & NAAC – 'A' Grade - ISO 9001:2008 Certified)

Maisammaguda, Dhulapally (Post Via Hakimpet), Secunderabad – 500100

DEPARTMENT OF INFORMATION TECHNOLOGY

Faculty Development Program through NKN Winter Course-2019

On

PYTHON PROGRAMMING WITH INDUSTRY PERSPECTIVE

From 02nd to 06th Dec, 2019

Under the banner of Electronics and ICT Academy, NIT Patna and In association with

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY(MRCET CAMPUS)

(Autonomous Institution-UGC, Govt.of India)

Under the

"Scheme of financial assistance for setting up of Electronics and ICT Academies" of the
Ministry of Electronics and Information Technology (MeitY), Government of India

Venue:

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY, SECUNDERABAD,TELANGANA STATE

FACULTY DEVELOPMENT PROGRAMME

ON

Python Programming with Industry Perspective

02 – 06 DECEMBER, 2019

MALLA REDDY COLLEGE OF ENGINEERING & TECHNOLOGY
DEPARTMENT OF INFORMATION TECHNOLOGY
Five-Day FDP on "Python Programming with Industry Perspective"
December 2nd 2019 to December 6th 2019
REPORT

www.mrcet.com

The Five-day FDP on "Python Programming with Industry Perspective" was conducted by the Department of Information Technology between 02-06 December, 2019 through NKN mode E & ICT Academy, NIT Patna.

Ministry of Electronics & Information Technology (MeitY) has approved a scheme and setup Electronics and ICT Academies at 07 (seven) institutions viz. IIT Guwahati, IIT Kanpur, NIT Warangal, NIT Patna and IIITDM Jabalpur (all five under Category-A); and IIT Roorkee, MNIT Jaipur (both under Category B). These Academies are aimed at faculty/mentor development and upgradation to improve the employability of the graduates, diploma holders in various streams, through collaboration of States/Union Territories. Each Academy is being provided funding support for four years and is expected to generate revenue by charging fee and taking up other activities to meet the recurring cost in a gradual manner and become self-sustaina

About Winter Courses

Faculty Development Programmes in core areas of Electronics and Information & Communication Technology (ICT) streams have been planned by academies for delivery during Winters (i.e., Dec'19 – Jan'20). All these Winter courses will be offered through National Knowledge Network (NKN) based Video Conferencing, with lectures delivered by invited experts from IITs, NITs, IIITs and other premier institutes/industries. In addition, local course coordinators at respective academies /identified remote centres will take care of sessions on design orientation/activity linked problems/ assignments/ case studies and quiz test(s). All seven EICT Academies will host the participants simultaneously alongwith some select remote centres all over our country, through NKN-VC infrastructure.

The programmes being offered in this Winters, Dec 2019- Jan 2020, each of 5 days duration :

S.No.	Course Name	Principal Coordinating Academy	Co-Principal Coordinating Academy	Starting date of Programme	Last date of receiving applications
1	Python Programming with Industry perspective	MNIT Jaipur Dr. E. S. Pilli	NIT Patna Dr. Bharat Gupta	2 Dec 2019	25 Nov 2019

The following are the details of Winter courses being offered during Dec'19 –Jan'2020.
Prospective external Experts- (i) Dr. Mani Madhukar, Program Manager - University Relations, IBM India Pvt. Ltd
Experts from host institutes- (ii) Dr. E. S. Pilli,

Contents of Python Programming with Industry Perspective

S.No.	Module Name	Topics
1.	**Introduction & basics of to Python Programming:**	History of Python, Installing Python, Executing Python Programs, Internal Working of Python, Python Implementations. Python Character Set, Token, Python Core Data Type, print() function, Assigning Value to Variable, input() function, eval() function,

		Formatting Number and Strings, Operators and Expressions
2.	**Decision Statements; Loop Control Statements; Functions, Strings**	Boolean Type, Boolean Operators, Using Number and Strings with Boolean Operators, Decision Making Statements and Conditional Expressions While loop, range( ) Function, For Loop, Nested Loops, Break Statement, Continue Statement Syntax and Basics of a Function, Use of a function, Parameters and Arguments, Local and Global Scope Scope of a Variable, return statement and Recursive Functions. str class, Inbuilt functions for String, index[] operator, traversal of String, String operators, String Operations
3.	**Lists and Dictionaries; Tuples and Sets; File Handling; Pandas**	Creating Lists, Basic list operators, Slicing, Inbuilt functions for Lists, List operator, List Methods, Splitting, Need of Dictionary, Creating a Dictionary , Adding and Replacing Values, Retrieving Values ; Deleting Items and Traversing Dictionaries. Tuples and Sets: Creating Tuples; Tuple () Function, Inbuilt Functions for Tuples, Indexing and Slicing; Operations on Tuples; Traverse Tuples from a List, Set operators; Set class. Object-Oriented Programming: Classes and objects, methods, Operator Overloading, Inheritance, super () and Method Overriding. File Handling: Need of File Handling, Reading/Writing Text and Numbers to/from a File; Directories on a disk. Pandas: Using Pandas, the python data analysis library and data frames
4.	**Data Handling and Use Cases**	RE Pattern Matching, Parsing Data, Introduction to Regression , Types of Regression , Use Cases , Exploratory data analysis , Correlation Matrix , Visualization using Matplotlib and Implementing linear regression.
5.	**Machine Learning**	Machine Learning - Algorithm, Algorithms - Random forest , Super vector Machine , Random Forest , Build your own model in python and Comparison between random forest and decision tree.

Following are the incharges five-day FDP:

S.No.	Incharges	Name
1.	Coordinator	Dr. N.S. Gowri Ganesh
2.	Lab Faculty/Lab In-Charge Name	Mr.K. Sudhakar Reddy
3.	NKN/VC faculty In charge Name	Mr.I. Uma Maheswara Rao

The inauguration of the seminar was attended by our beloved principal Dr. V.S.K.Reddy sir , Dean Academics Dr. Muralikrishna sir, Heads of the Department CSE Dr.D.Sujatha mam, ECE HOD Dr. Srinivasa Rao Sir, Mechanical HOD Dr. Amarnath Reddy sir

SCHEDULE OF THE FDP

NKN Winter FDP on "Python Programming – an Industry Perspective " from December 2-6. 2019 Jointly organized by: Electronics & ICT Academies at - MNIT Jaipur, NIT Patna & IIITDM Jabalpur

Detailed Program Schedule

Date/Time	9.15 -11.05 AM		11.15-01.15	02.00-03.50	04.10-06.00
02-12-2019 (Monday)	**9-10 AM** Inauguration session	**10-11 AM** Python Introduction Installation	**Installation: Playing with Python UI Lab-1**	**Operators, Conditional Statements, String Operations**	**Operator, Loops, String manipulation Lab-2**
03-12-2019 (Tuesday)	**Functions and List**		**Functions and Lists Assignments Lab-3**	**OOPs implementations Tuple assignments**	**Implementation of OOPs Working with Tuple Lab-4**
04-12-2019 (Wednesday)	**Dictionary, Set, File handling, Exception, Handling**		**Working with Dictionary, Set File handling, Exception Handling Assignments Lab-5**	**Regular Expression**	**Regular Expression Lab-6**
05-12-2019 (Thursday)	**Python Project Discussion (Online lab session)**		**Project Execution (Online lab session) Lab-7**	**Understanding Anaconda, Installation Understanding NumPy**	**Anaconda Installation Working with NumPy Lab-8**
06-12-2019 (Friday)	**Understanding Pandas Working with Datasets**		**Working with Pandas Exploring datasets for salary and economic purchase Lab-9**	**Understanding Matplotlib, SciPy Exploring Scikit Learn**	**Working with Regression Clustering, Working with Matplotlib, Scikit Learn, SciPy Lab-10 & Local Valedictory**

Resource Persons:

1. **Dr. Mani Madhukar, Program Manager - University Relations, IBM India Pvt. Ltd**
2. **Mr. Ishan Vaid, Trainer, IBM Partner**

Global Coordinators: **Dr. Pilli Emmanuel Shubhakar, MNIT Jaipur & Dr. Bharat Gupta, NIT Patna**

PHOTO GALLERY

Figure 1 Group Photo of participants with principal Dr.V.S.K. Reddy

Figure 2 Inaugural of FDP with Principal Dr. V.S.K. Reddy Sir, Dean Academics Dr. Murali Krishna and HOD-IT Dr. N.S. Gowri Ganesh
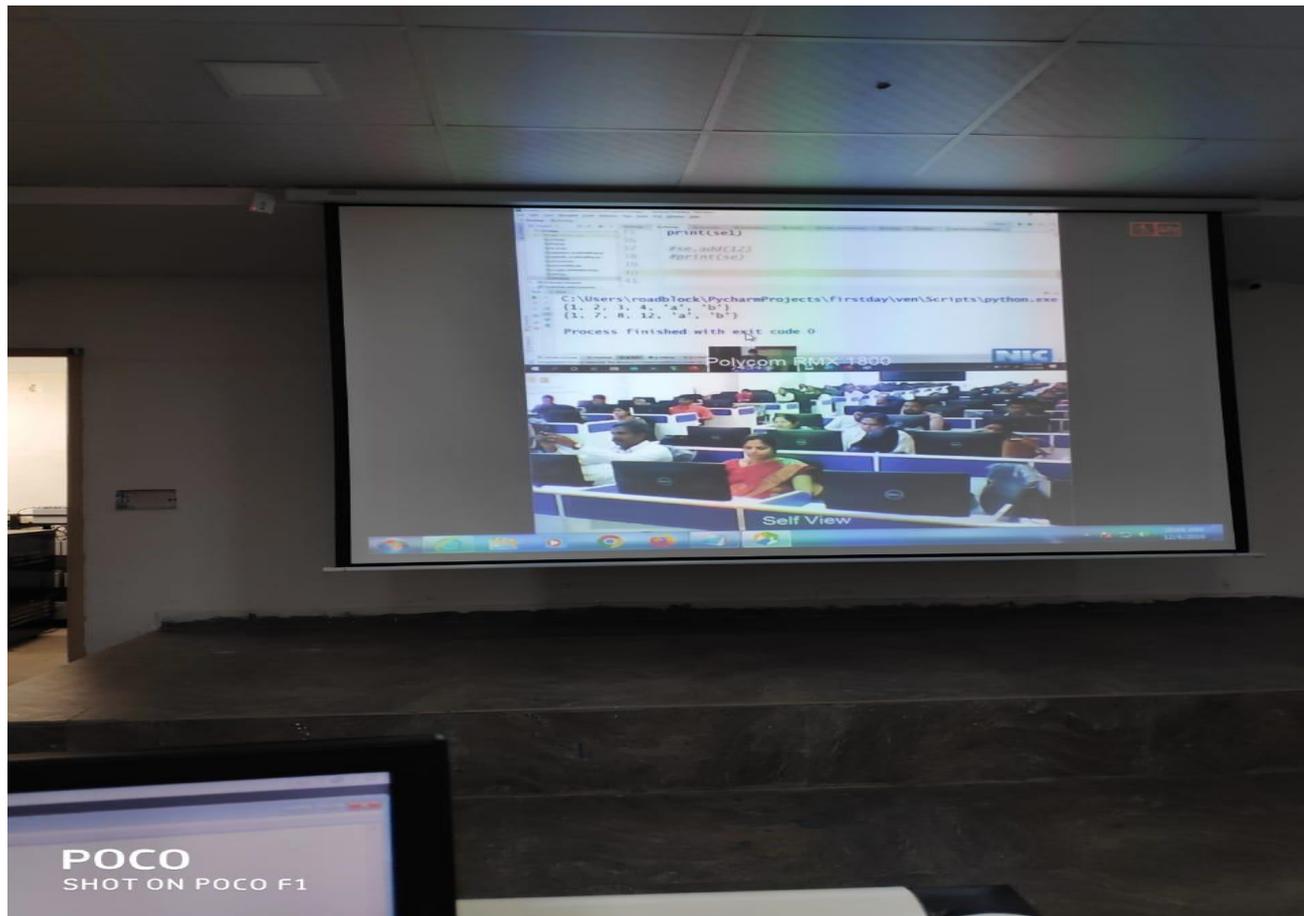

Figure 3 VC Connectivity to MNIT, Jaipur through NIT Patna

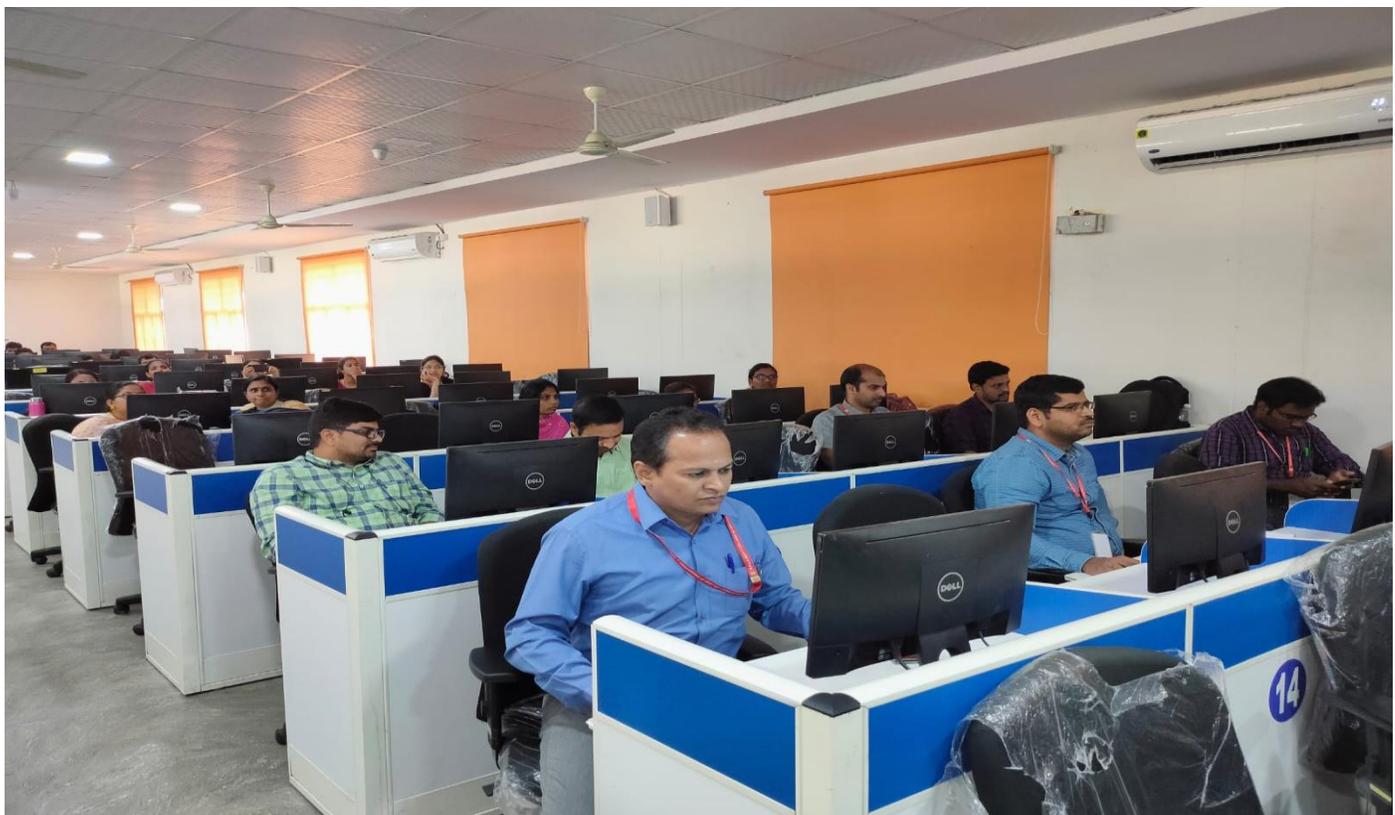**Figure 4 Particpants listening to the lectures**

Figure 5 Particpants working on Assignments

Figure 6 Valedictory Function

Figure 7 Valedictory Function DrV.S.K.Reddy Sir, Dean Academics Dr.Murali Krishna, HOD-IT Dr. N.S. Gowri Ganesh, HOD-CSE Dr.D. Sujatha, HOD-ECE Dr. S.Srinivasa Rao, Mr. Sudhakar Reddy Co-coordinator(Lab), Mr. Uma MaheswaraRao Co-Coordinator(NKN)
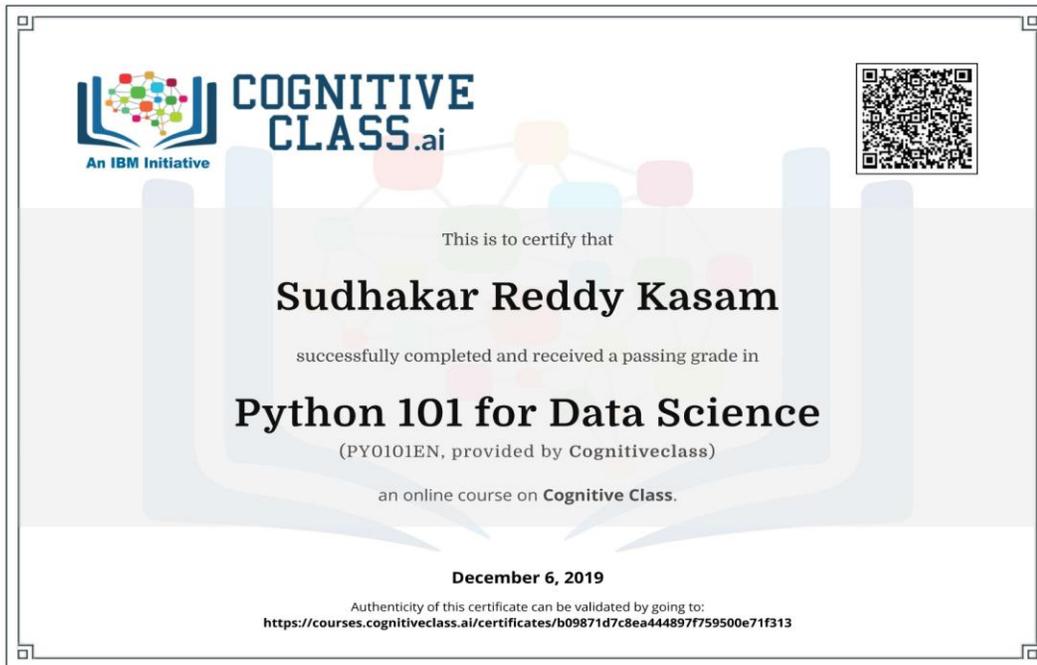
Figure 8 IBM certificate for the IBM online exam Pyton for Data Science

Figure 9 NITPatna certicate received by participant endorsed by AICTE/UGC/NBA