

**Joint Online Faculty Development
Programme
Python Programming
Sept 07 to Sept 18, 2020**

Jointly Organized by:
NIT Patna,
IIIT DM Jabalpur,
MNIT Jaipur

Resource Persons

Prof. Aparajita Ojha IIITDM Jabalpur
Dr. Arka P. Mazumdar MNIT Jaipur
Dr. Emmanuel S. Pilli MNIT Jaipur

Supported By :



**Ministry of Electronics and
Information Technology
Government of India**

Details



Patron

Prof. P. K. Jain
Director, National Institute of
Technology Patna

Academic Level Coordinator

Dr. Prabhat Kumar,
National Institute of Technology Patna

Proctor Level Coordinator

Dr. Sachin Bhaskar,
Impact College, Patna

About NIT Patna

National Institute of Technology Patna is the 18th National Institute of Technology created by the Ministry of H.R.D. Government of India after rechristening the erstwhile Bihar College of Engineering Patna on 28.01.2004. The Institute imparts high level education training, research and development in science, engineering technology and humanities along with high quality education and values at UG, PG and Ph.D. level. At present the Institute offers courses in six major technical disciplines viz. Architecture, Civil Engineering, Computer Science & Engg., Electrical Engg., Electronics & Communication Engg. And Mechanical Engg. It also consists of well-established departments of Physics, Chemistry, Mathematics and Humanities and Social Sciences.

About E&ICT Academy Patna

Ministry of Electronics and Information Technology, Government of India has instituted seven Electronics and Information & Communications Technology (ICT) Academies of which, the academy of NIT Patna is one. The Academy at NIT Patna aims to design and organize basic as well as specialized training programmes in niche areas of electronics and ICT for the development of required knowledge base, skills and tools to equip the teaching community with better knowledge and understanding.

Contact Details: E & ICT Acacemy, NIT Patna (office)

Website: <http://www.nitp.ac.in/ict/>

Landline: 0612 - 237 1715 / 237 2715 (Ext: 344)

Email: eictapatna@nitp.ac.in, sachinbhaskar007@yahoo.com

Contact : http://www.nitp.ac.in/ict/Contact_us.php

Course Contents

- Introduction & basics of 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, Differential Evolution, Social Spider Optimization .
- 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.
- 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 R 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.
- 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.
- 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.

Key Features

- Online / Live lectures sessions by subject experts.
- Comprehensive tutorials and practice notes.
- Online lab and training sessions.
- Follow up sessions and discussion forums on research problems and internships.

Course Fee Details

Faculty/ PhD Scholar: Rs. 500/-
(SC/ST = Rs. 250/-)

Others (Except Faculty/PhD-Scholar): Rs. 1000/- (SC/ST = Rs. 500/-)

Online payment details

Bank Name: Allahabad Bank
Account Name: NIT Patna
Account No.: 50380476798
IFSC Code: ALLA0212286

Link for registration:

<https://forms.gle/h9CWtvaVzy7y9mmLA>

(Please select Dr. Sachin Bhaskar as your Proctor Coordinator Name)

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