



FACULTY DEVELOPMENT PROGRAMME

on

Python for Scientific Computing

Organized by

Center for Continuing Education, NIT Warangal and

Department of Computer Science and Engineering,

Velagapudi Ramakrishna Siddhartha Engineering College, Kanuru, Vijayawada



Dates: September 19 – 23, 2022

Session Timings: 5:00 PM to 8:00 PM

About the NIT Warangal:

National Institute of Technology, Warangal is the first among 17 RECs setup as joint venture of the Government of India and the state government. Over the years, the college has established itself as a premier Institute imparting technical education of a very high standard leading to the B. Tech degrees in various branches of engineering, M. Tech, and Ph. D programs in various specializations. All B. Tech and M. Tech programmes of NIT Warangal are NBA accredited.

Centre for Continuing Education (CCE) NIT Warangal:

This CCE of NIT Warangal organizes Continuing Education Programmes and Workshops in the frontier areas of Science, Engineering, Technology, Management, Humanities, Social Science and Socially relevant themes on self-financing basis in three different modes: (i) At NIT Warangal by NIT Warangal (ii) At NIT Warangal in collaboration with other organizations (iii) By NIT Warangal Faculty at the Host Organization/Institute.

About Velagapudi Ramakrishna Siddhartha Engineering College, Vijayawada:

Velagapudi Ramakrishna Siddhartha Engineering College (VRSEC) is an Autonomous Institution approved by the All India Council for Technical Education (AICTE) and is under the affiliation of Jawaharlal Nehru Technological University, Kakinada (JNTUK). Established in 1977 the VRSEC has an excellent infrastructure and highly committed, qualified, competent and dedicated faculty. The college is known for its excellent placement record. The VRSEC, with good ambience and serenity, offers an inspiring learning environment which transforms the young bright minds into talented and creative professionals. The college was built in 25 acres of land in Vijayawada City of Andhra Pradesh State. The VRSEC has several outstanding features. The college is accredited with NBA and NAAC 'A+' grade.

About Dept. of CSE, VRSEC:

The department of CSE was established in the year 1986, offers B.Tech programme in Computer Science and Engineering and one M.Tech Programme in Computer Science and Engineering. The B.Tech program was accredited by NBA of AICTE in 2005, 2008 2015 and 2018. The M.Tech program was accredited by NBA in 2015. The department has a team of highly qualified senior faculty with specializations in core areas of Computer Science and Engineering. The CSE department has been sanctioned projects from various organizations like UGC, AICTE, DST, Dept. of Space-NRSC and ADRIN. It has a faculty strength of 46 and an intake of 180 students for UG and 36 for PG programmes.

About the course:

Python is a modern, object-oriented programming language, which has become popular in several areas of software development. This course discusses how Python can be utilized in scientific computing. The course starts by introducing the core Python package for numerical computing, NumPy, and then discusses SciPy toolbox for various scientific computing tasks as well as visualization with the Matplotlib package. This FDP aims to impart knowledge and training on the fundamentals of Python and the different aspects and applications in various fields of science and engineering.

Course Contents

- ❖ Introduction to Python: Installation, Python Editors
- ❖ Variables, Objects, Operators, Primitive Data Types
- ❖ Compound Data types: List, Tuples, Sets, Dictionaries
- ❖ Conditional Statements Loops: for, while, do while
- ❖ Functions, Building your own functions Numpy: Multi-dimensional Arrays
- ❖ Matplotlib: 2D and 3D plotting in python Regular Expressions
- ❖ Scipy: Scientific library for python Pandas: Providing high-performance, easy-to-use data structures.
- ❖ SymPy: Symbolic mathematics and computer algebra.
- ❖ NetworkX: Library for analyzing complex networks.
- ❖ scikit-image: Collection of algorithms for image processing.
- ❖ scikit-learn is a collection of algorithms and tools for machine learning.

Resource Persons:

Eminent faculties from IITs, NITs, Central Universities, Experts from Industries and Senior faculty members from different departments of NIT Warangal will deliver talks and conduct hands on sessions.

Who should Attend?

The Programme is open to Faculty members, Research scholars, PG students, UG students of all Engineering colleges and other allied disciplines in India.

Registration:

Registration fee is Rs.: 500/- for participant.

Registration fee may be remitted Online through NEFT to the Bank account given below. Proof of remittance of the requisite registration fee (with transaction number if online transaction) shall be uploaded in the google form.

Account Name	Centre for Continuing Education, NITW
Bank Name	State Bank of India
A/C No.	62403680215 (Savings Account)
IFSC Code	SBIN0020149
Branch	NIT Warangal

How to Apply: Eligible candidates may apply by filling the following Google form with payment proof on or before 16th September 2022.

<https://forms.gle/WvxHPUEAUoLenCAV7>

(If the form does not open by clicking on it, then please copy the link, paste to browser and press enter)

Course Coordinator from NITW

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