

**DEPARTMENT OF COMPUTER APPLICATIONS**  
**NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI**

<b>COURSE PLAN - PART I</b>			
Name of the programme and specialization	Master of Computer Applications		
Course Title	Problem Solving Lab using Python		
Course Code	CA701	No. of Credits	2
Course Code of Pre-requisite subject(s)	NIL		
Session	July 2022	Section (if, applicable)	A
Name of Faculty	J. Tulasiram (Research Scholar)	Department	Computer Applications
Email	405120007@nitt.edu	Telephone No.	
Name of PAC Chairman	Dr. U. Srinivasulu Reddy		
E-mail	usreddy@nitt.edu	Telephone No.	0431-2503746
Course Type	Core course		
<b>Syllabus (approved in BoS)</b>			
Exercises for learning basic features of Python and exercises to implement various applications in Python.			
<b>COURSE OBJECTIVE(S)</b>			
Acquire programming skills in core Python and Object-oriented programming skills in Python. Acquire Python programming skills to apply in Data Science, Machine Learning (ML), Artificial Intelligence (AI) etc.			
<b>COURSE OUTCOMES (CO)</b>			
<b>Course Outcomes</b>		<b>Aligned Programme Outcomes (PO)</b>	
<b>After successful completion of the course, students should be able to:</b>			
1. Demonstrate the basic concepts of python programming with the help of data types, operators and expressions, console input/output Understand 2. Make use of control statements for altering the sequential execution of programs in solving problems. 3. Demonstrate operations on built-in container data types (list, tuple,set, dictionary) and strings. 4. Make use of operations and applications on strings with the help of built in functions and solve the problems by using modular programming concepts through functions.		<b>PO I, II, III, IV, V</b>	

**COURSE PLAN - PART II****COURSE OVERVIEW**

This course concentrates on basics of Python programming and Data science applications. This course allows the students to understand practically in implementation of functional programming and Data science applications.

**COURSE TEACHING AND LEARNING ACTIVITIES**

S. No.	Week/ Contact Hours	Topic	Mode of Delivery
1	Week 1 (3 Hrs)	Introduction to IDE , Anaconda, Jupyter notebook and PyCharm and demo programs	Offline
2	Week 2 (3 Hrs)	Introduction to operators in Python Programming	-do-
3	Week 3 (3 Hrs)	Exploring the Control Structures	-do-
4	Week 4 (3 Hrs)	Working with List and examples	-do-
5	Week 5 (3 Hrs)	Exploring the concepts on Tuples with Example programs	-do-
6	Week 6 (3 Hrs)	Exploring the concepts on SET with Example programs	-do-
7	Week 7 (3 Hrs)	Exploring the concepts on Dictionaries with Example programs	-do-
8	Week 8 (3 Hrs)	Performing different operations with Strings	-do-
9	Week 9 (3 Hrs)	Exploring the functions concepts and Recursion	-do-
10	Week 10 (3 Hrs)	Introduction to Classes and objects	-do-
11	Week 11 (3 Hrs)	Working with File handling and Error Handling exceptions	-do-
12	Week 12 (3 Hrs)	Working on Data Science Libraries with Pandas and Numpy	-do-



**COURSE ASSESSMENT METHODS**

S. No.	Mode of Assessment	Week/Date	Duration	% Weightage
1	Lab Activities	Periodic	--	30
2	Evaluation-I	6 <sup>th</sup> Week	120 Minutes	20
3	Evaluation-II	10 <sup>th</sup> week	120 Minutes	20
CPA	Compensation Assessment*	As per the academic schedule	120 Minutes	20
4	Final Assessment	As per the academic schedule	120 Minutes	30
Total Marks				100

**COURSE EXIT SURVEY** (mention the ways in which the feedback about the course shall be assessed)

The students through the class representative may give their feedback at any time to the course coordinator which will be duly addressed.

The students may give their feedback during class committee meetings.

**COURSE POLICY** (including compensation assessment to be specified)

**MODE OF CORRESPONDENCE**

By Email: [405120007@nitt.edu](mailto:405120007@nitt.edu)

**COMPENSATION ASSESSMENT POLICY**

The compensation assessment will be conducted for absentees in assessments (other than final assessment) only after the submission of medical or On-duty certificates signed by the competent authority.

**ATTENDANCE POLICY** (A uniform attendance policy as specified below shall be followed)

- **At least 75% attendance in each course is mandatory.**
- **A maximum of 10% shall be allowed under On Duty (OD) category.**
- Students with **less than 65% of attendance** shall be prevented from writing the final assessment and **shall be awarded 'V' grade.**

**ACADEMIC DISHONESTY & PLAGIARISM**

- Possessing a mobile phone, carrying bits of paper, talking to other students, copying

from others during an assessment will be treated as punishable dishonesty.

- Zero mark to be awarded for the offenders. For copying from another student, both students get the same penalty of zero mark.
- The departmental disciplinary committee including the course faculty member, PAC chairperson and the HoD, as members shall verify the facts of the malpractice and award the punishment if the student is found guilty. The report shall be submitted to the Academic office.

The above policy against academic dishonesty shall be applicable for all the programmes.

**ADDITIONAL INFORMATION**

NIL

**FOR APPROVAL**

Course Faculty 

CC-Chairperson



HOD

