Yogoda Satsanga Mahavidyalaya
JAGANNATHPUR, DHURWA, RANCHI – 834004
Email address: ysmranchi4@gmail.com
(NAAC Accredited, Grade: B++, CGPA: 2.89)

COURSE PLAN

NAME OF THE DEPARTMENT: **BCA/IT**

NAME OF THE FACULTY: **Prof. Priyanka Kumari**

ACADEMIC SESSION: **2023-24**

YEAR: **2024**

PROGRAMME: **CA & IT**

SEMESTER: **V**

COURSE TYPE: **DSE**

COURSE NAME: **IT**

COURSE CODE: **DSE2**

TOTAL CREDIT: **6**

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PROGRAMME OUTCOMES (PO):

PO1: Scientific & Computational Knowledge: - Apply the information on scientific & computational ideas, software engineering and innovation basics.

PO2: Problem Analysis, Design & Implementation: - Identify, formulate and analyze real world problem. Design solution for Software, Hardware & Networking problems and implementation using Software & Network tools.

PO3: Modern tool usage: - Ability to select modern computing tools, skills and techniques necessary for innovative software solutions.

PO4: Project Management: -Comprehend Software Engineering and Technology standards and apply these to prepare own project and system as a part and pioneer in a group.

PO5: Career Development & Entrepreneurship: Classify opportunities, private enterprise dream and use of original thoughts to build worth and means for the betterment of the human being and the world.

PO6: Communication: Communicate effectively on computational & information Technology activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO7: Ethics: Ability to apply and commit professional Ethics, cyber regulations & control on software piracy in a global economic environment.

PO8: Preparing students for future aspects: Building and improving their creativity, social awareness, and general knowledge.

PO9: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological changes.

PROGRAMME SPECIFIC OUTCOMES (PSO):

PSO1: An ability to apply technical comprehension in varied areas of Computer Applications and experience a conducive environment in cultivating skills for thriving career and higher studies.

PSO2: Understand the concept of Programing logic, Web designing logic, Signal processing, Image processing, Mobile Applications, Multimedia Media.

PSO3: Develop competencies in various disciplines of technologies such as Server-side Web applications, computer networking, software engineering, database concepts and programming

COURSE OUTCOMES (COs):

CO1: Examine Python syntax and semantics and be fluent in the use of Python flow control and functions.

CO2: Demonstrate proficiency in handling Strings and File Systems

CO3: Determine the methods to create and manipulate Python programs by utilizing the data structures like lists, dictionaries, tuples and sets.

CO4: Identify the commonly used operations involving file systems and regular expressions.

CO5: Articulate the Object-Oriented Programming concepts such as encapsulation, inheritance and polymorphism as used in Python.

CO6: Write, Test and Debug Python Programs

CO7: Implement Conditionals and Loops for Python Programs, Use functions and represent Compound data using Lists, Tuples and Dictionaries

CO8: Read and write data from & to files in Python and develop Application using Pycharm.

COURSE TEACHING AND LEARNING ACTIVITIES

A. PEDAGOGY

i. Whiteboard √

ii. Flipped Class √

iii. PPT √

B. COURSE COMPLETION PLAN

UNIT	NO. OF LECTURES		TEST	QUIZ	ASSIGNMENT
	THEORY	PRACTICAL/TUTORIAL			
1	10		√		√
2	7	5	√		√
3	15	10	√		√
4	4	6	√		√
5	6	2	√		√
6	8	2	√		√
7	8	2	√		√
8	10	15	√		√

A. COURSE DELIVERY PLAN:

UNIT	TOPIC/SUBTOPIC	LECTURE REQUIRED (Theory & Practical)	CO ADDRESSED	ASSIGNMENT/ TEST/QUIZ
1	Concept of problem solving, Problem definition, Program design, Debugging, Types of errors in programming, Documentation	10	CO1	√
2	Flowcharting, decision table, algorithms, Structured programming concepts, Programming methodologies viz. top-downand bottom-up programming.	5	CO2	√
3	Structure of a Python Program, Elements of Python	10	CO3	√
4	Python Interpreter, Using Python as calculator, Python shell, Indentation. Atoms, Identifiers and keywords, Literals, Strings	10	CO4	√
5	Operators(Arithmetic operator, Relational operator, Logical or Boolean operator,	10	CO5	√

	Assignment, Operator, Ternary operator, Bit wise operator, Increment or Decrement operator)			
6	Input and Output Statements, Control statements.	**5**	**CO6**	√
7	Branching, Looping, Conditional Statement, Exit function, Difference between break, continue and pass.	**5**	**CO7**	√
8	Defining Functions, default arguments	**5**	**CO8**	√

B. COURSE OUTCOME ASSESSMENT PLAN

a. DIRECT ASSESSMENT

(Please tick the appropriate column)

COURSE OUTCOME	ASSESSMENT				REMARKS
	QUIZ	TEST	MID SEMESTER	END SEMESTER	
CO1		√	√		
CO2		√	√		
CO3		√	√		
CO4		√	√		
CO5		√	√		
CO6		√	√		
CO7		√	√		

C. SUGGESTED READINGS

a. TEXT BOOKS

- T. Budd, Exploring Python, TMH, 1st Ed, 2011
- Python Tutorial/Documentation www.python.or 2015
- Allen Downey, Jeffrey Elkner, Chris Meyers , How to think like a computer scientist : learning with Python , Freely available online.2012

b. VIDEO RESOURCE

- https://www.youtube.com/watch?v=_uQrJ0TkZlc
- https://www.youtube.com/watch?v=b093aqAZiPU
- https://www.youtube.com/watch?v=Z1Yd7upQsXY

c. WEB RESOURCES

- https://www.w3schools.com/python/
- https://docs.python.org/3/tutorial/index.html
- https://www.tutorialspoint.com/python/index.htm
- https://www.geeksforgeeks.org/python-programming-language/

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