ATSS'S
Institute of Industrial & computer Management & Research
Nigdi Pune -44

Criterion II Teaching Learning and Evaluation

Key Indicator 2.6 Student Performance and Learning Outcome

2.6.2 Attainment of Programme outcomes and course outcomes are evaluated by the institution.

Program outcome and Course outcome Calculation

Atss's Intitute of Industrial and Computer Management and Research, Nigdi

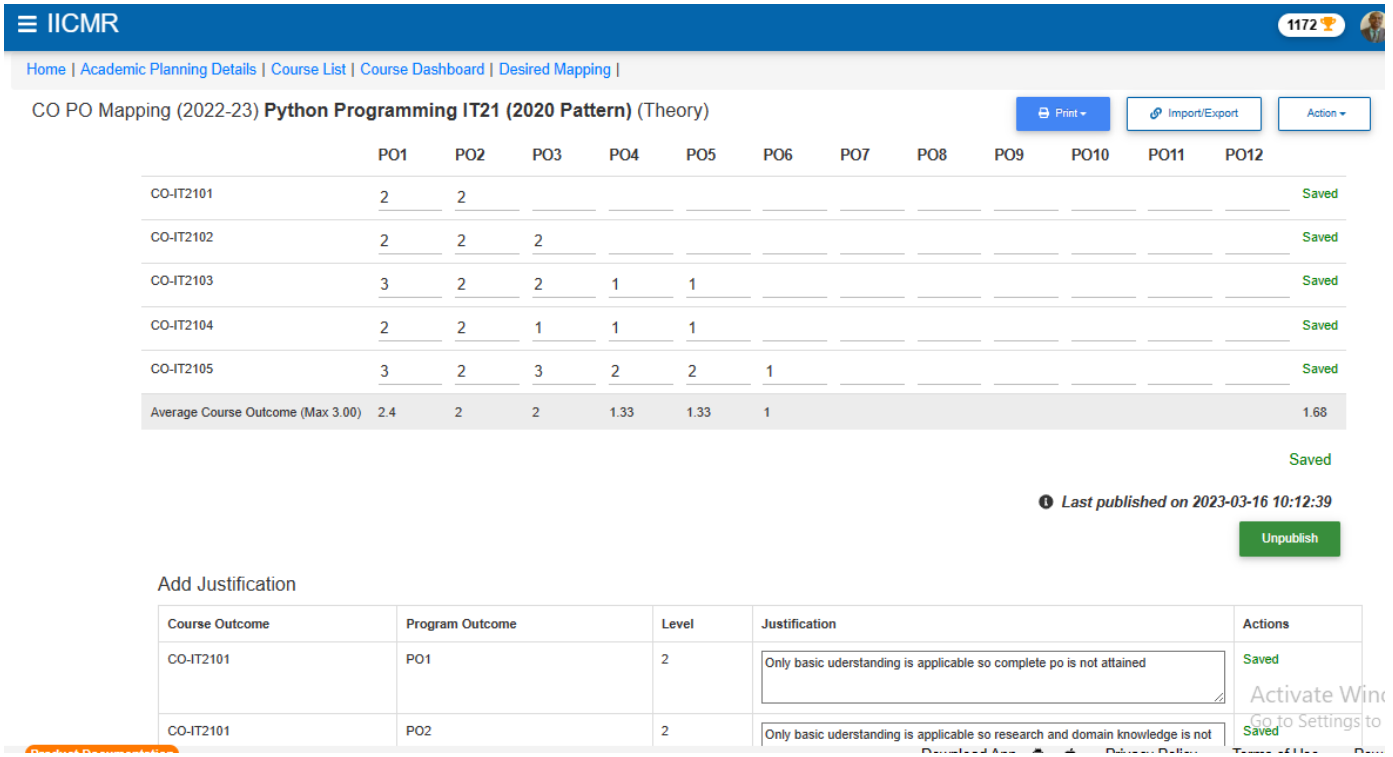
MCA- 1 Sem- II (A.Y. 2022-2023)

Course Outcomes

Course: IT21:- Python Pogramming (Theory)

Course Outcomes	Description	Mapping
CO-OC21.1	Understand Demonstrate the concepts of python and modular programming.	PO1,PO2,PO3
CO-OC21.2	Apply the concepts of concurrency control in python	PO1,PO2,PO3,PO4
CO-OC21.3	Solve the real-life problems using object-oriented concepts and python libraries	PO1,PO2,PO3,PO4,PO5
CO-OC21.4	Demonstrate the concept of IO, Exception Handling, database	PO1,PO2,PO3,PO4,PO5
CO-OC21.5	Analyze the given dataset and apply the data analysis concepts and data visualization	PO1,PO2,PO3,PO4,PO5,PO6
CO-OC22.6	Students will be able to apply appropriate resources and modern IT tools with an understanding of its limitations to communicate effectively with the engineering community and society at large in online mode.	PO5,PO7,PO9

PO1	PO1: Apply knowledge of computing fundamentals, computing specialization, mathematics, and domain knowledge appropriate for the computing specialization to the abstraction and conceptualization of computing models from defined problems and requirements.
PO2	PO2: Identify, formulate, research literature, and solve complex Computing problems reaching substantiated conclusions using fundamental principles of Mathematics, Computing sciences, and relevant domain disciplines.
PO3	PO3: Design and evaluate solutions for complex computing problems, and design and evaluate systems, components, or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations.
PO4	PO4: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions.
PO5	PO5: Create, select, adapt and apply appropriate techniques, resources, and modern computing tools to complex computing activities, with an understanding of the limitations.
PO6	PO6: Understand and commit to professional ethics and cyber regulations, responsibilities, and norms of professional computing practice.
PO7	PO7: Recognize the need, and have the ability, to engage in independent learning for continual development as a Computing professional.
PO8	PO8: Demonstrate knowledge and understanding of computing and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments
PO9	PO9: Communicate effectively with the computing community, and with society at large, about complex computing activities by being able to comprehend and write effective reports, design documentation, make effective presentations, and give and understand clear instructions.
PO10	PO10: Understand and assess societal, environmental, health, safety, legal, and cultural issues within local and global contexts, and the consequential responsibilities relevant to professional computing practice.
PO11	PO11: Function effectively as an individual and as a member or leader in diverse teams and in multidisciplinary environments.
PO12	PO12: Identify a timely opportunity and using innovation to pursue that opportunity to create value and wealth for the betterment of the individual and society at large.



	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO-OC21.1	2	2										
CO-OC21.2	2	2	2									
CO-OC21.3	3	2	2	1	1							
CO-OC21.4	2	2	1	1	1							
CO-OC21.5	3	2	3	2	2	1						
CO-OC21.6					2		2		2			
Average	2.4	2	2	1.33333	1.33333	1						

Strength of correlation:

Substantial (High/Strong): 3
Moderate (Medium): 2
Slight (Low/Poor): 1

Level of Attainment	Rule for Attainment
3	60% or more students having more than average marks
2	50% or more students having more than average marks
1	less than 50% having more than average marks

PO attainment Target Criteria		
Particulars	**Target Values**	**Associated POs**
set Target for Hard POs	60%	PO1,PO2,PO3,PO4
set Target for Soft POs	50%	PO5,PO6,PO7,PO8,PO9,PO10,PO11,O12

Atss's Intitute of Industrial and Computer Management and Research, Nigdi

MCA- 1 Sem- II (A.Y. 2022-2023)

Course Exit Survey - Analysis

Course: IT21:- Python Pogramming (Theory) Name of Faculty: Mr. Sanjay Mate

	Code warrior			Technocrat			Total		
	Excellent	Good	Satisfacto	Excellent	Good	Satisfacto	Excellent	Good	Satisfactory
How much you understood the concepts of python and modular programming?(CO-IT 21.1)	30	20	2	27	17	7	57	37	9
How well you are able to implement concurrency control in python using threading? (CO-IT21.2)	23	23	6	22	17	4	45	40	10
How good you are for solving real-life problems, using objects and libraries ?(CO-IT 21.3)	23	24	5	19	19	9	42	43	14
How well you are able to write program on IO, Exception Handling and database.(CO-IT 21.4)	23	25	4	20	20	7	43	45	11
How well you will be able to analyze dataset and apply the data analysis concepts and data visualization? (CO-IT 21.5)	22	26	4	20	21	6	42	47	10
CO wise Attainment	CW	TC	Average						
CO-OC22.1	2.54	2.34	2.44						
CO-OC22.2	2.33	2.3	2.315						
CO-OC22.3	2.35	2.21	2.28						
CO-OC22.4	2.37	2.28	2.325						
CO-OC22.5	2.35	2.28	2.315						

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CO Attainment

Course: IT21:- Pgthon Pogramming (Theory) Name of Faculty: Mr. Sanjay Mate,Mr. Sanjay Mathpati

CO→ / Assessment tools↓	CO-OC22.1	CO-OC22.2	CO-OC22.3	CO-OC22.4	CO-OC22.5	CO-OC22.6	
Direct Assessment							
Internal Assessment							
Assignment1						3	
Assignment2	3	3	3	3	3		
Mid Term Exam	3	3					
Unit Test 1	3						
Unit Test 2		3					
Unit Test 3			2				
Unit Test 4				3			
Unit Test 5					3		
Viva	3	3	3	3	3		
Average direct Assessment=	**3**	**3**	**2.66667**	**3**	**3**	**3**	
A = Internal attainment X 0.3=	0.9	0.9	0.8	0.9	0.9	0.9	
University exams							
End Sem Result (*)	2	2	2	2	2		(*) re
B = University Result X 0.7=	1.4	1.4	1.4	1.4	1.4	0	
Total Attainment -Direct Assessment D= (A+B)*.7	**1.61**	**1.61**	**1.54**	**1.61**	**1.61**	**0.63**	
Indirect Assessment							
C = Course Exit Survey Attainment	2.555	2.41	2.51	2.395	2.425	0	
Total Attainment -Indirect Assessment I= (C)*.3	0.7665	0.723	0.753	0.7185	0.7275	0	
CO Attainment = D+I	**2.377**	**2.333**	**2.293**	**2.3285**	**2.3375**	**0.63**	

Direct PO Attainment

CO\PO	CO Attainment	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO-OC22.1	2.44	2	2										
CO-OC22.2	2.315	2	2	2									
CO-OC22.3	2.28	3	2	2	1	1							
CO-OC22.4	2.325	2	2	1	1	1							
CO-OC22.5	2.315	3	2	3	2	2	1						
CO-OC22.6	2.1					2		2		2			
PO Mapping Factor Sum		12	10	8	4	4	1	2		2			

CO\PO		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO-OC22.1		4.88	4.88										
CO-OC22.2		4.63	4.63	4.56									
CO-OC22.3		6.84	4.56	4.56	2.325								
CO-OC22.4		4.65	4.65	2.325	2.325								
CO-OC22.5		6.975	4.65	6.975	4.65	4.63	2.28						
CO-OC22.6						4.63		4.63		4.63			
PO Sum		27.975	23.37	18.42	9.3	9.26	2.28	4.63		4.63			
Overall Direct PO Attainment		2.3313	2.337	2.3025	2.325	2.315	2.28	2.315		2.315			
A = Overall Direct PO Attainment (80%)		1.865	1.8696	1.842	1.86	1.852	1.824	1.852		1.852			

Indirect PO Attainment

20%	Workshop attended	2.44	2.44	2.29		1.63		1.67	1.67				
	Guest Lecture/Seminar attended												
	Industry visit												
	Average		2.44	2.29		1.63		1.67	1.67				
B = Overall Indirect PO attainment (20%)			0.488	0.458		0.326		0.334	0.334				
Overall PO attainment (A+B)		**1.865**	**2.358**	**2.3**	**1.86**	**2.178**	**1.824**	**2.186**	**0.334**	**1.852**			

PO Achievement Matrix

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
Target PO attainment	1.8	1.8	1.8	1.8	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Achieved PO atainment	1.865	2.3576	2.3	1.86	2.178	1.824	2.186	0.334	1.852			

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