

Course learning objectives

On completion of this course students are able to ..

CLO1: Gain the knowledge about current status of herbal drug industry

CLO2: Isolate, identify and estimate phytopharmaceuticals.

CLO3. Formulate herbal formulations.

CLO4. Provide detailed information about standardization of herbal drugs.

CLO5. Deal with plant and enzyme biotechnology .

Programme outcome.

- a) an ability to apply knowledge of mathematics, science, and pharmacy,
- b) an ability to design and conduct experiments, as well as to analyze and interpret data,
- c) an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability,
- d) an ability to function on multidisciplinary teams,
- e) an ability to identify, formulate, and solve pharmacy problems,
- f) an understanding of professional and ethical responsibility,
- g) an ability to communicate effectively,
- h) the broad education necessary to understand the impact of pharmacy solutions in a global, economic, environmental, and societal context,
- i) a recognition of the need for, and an ability to engage in life-long learning,
- j) a knowledge of contemporary issues, and
- k) an ability to use the techniques, skills, and modern pharmacy tools necessary for pharmacy practice.

Program Educational Objectives (PEOs)

1. To train graduates, with a high level of professionalism, commitment, trustworthy, self confident, with sound knowledge in the discipline of pharmacy, and to reinforce strong academic foundation to further expertise them in the diverse field of pharmacy.
2. To produce pharmacy professionals equipped with knowledge and skill to cater to the health care needs of the society, technical need of the pharmaceutical industry and to contribute in the research and development areas of pharmaceuticals
3. To exhibit strong communication and interpersonal skills, with the provision of lifelong learning environment to develop and maintain high professional values and ethical standards to comprehend pharmacy profession and to deal with current issues related to it.

MAPPING OF CLO AND PO

POs CLO	a	b	c	d	e	f	g	h	i	j	k
CLO1	2		2		2				2		
CLO2	2	2	2	2	2		1		2	1	2
CLO3	2	1	2	1	2	2	1	2	1	1	2
CLO4	2	2	2		2		1		2	1	2
CLO5	2	2		2			1	2	2	2	

0= no contribution

1= Weak contribution

2 = Strong Contribution

How to frame questions for CLO attainment

CLO1: Gain the knowledge about current status of herbal drug industry

Mapping:

CLO1 – POa, POc, POe, POi

Assessment of CLO1:

1. List out Important Herbal industry and Institutions. What is current market status of Indian and world Herbal drug industry?

In this case, students are expected to apply the knowledge of Herbal Pharmacy subject specialization concepts and hence the assessment is in line with the CO and hence to POa. They are supposed update their knowledge of market value to arrive solution to the problem hence in line with POi.

How to correlate CLO with Questions in **Class test, quiz and Practical's**

CLO	TEST 1	Test 2	Test 3	Quiz 1	Quiz2	Practical
CLO1	Q1,	Q1		√		
CLO2	Q2	Q2				√
CLO3		Q3			√	
CLO4			Q1, Q2			√
CLO5			Q3, Q4			√

Practical

CLO2: Isolate caffeine

CLO3: Estimation of Alcohol in asava and arista

CLO5: Immobilisation of Enzyme

	Maximum Marks		Test 1 (12.5)	Test 2 (12.5)	25				
			CLO1		Total marks obtained	Total marks attempted	Percentage	Grading based on scale of 3	TARGET GREATER THAN 60%
	REG NO	NAME	T1-Q1 (12.5)	T2-Q1 (12.5)					
1	10p2512	MR.GHUTUGADE APPASO MAHADEV	10	5	15	100	60	1	
2	10p2515	MR.JAVALAGI BASAVARAJMALLIKARJUN	12	10	22	100	88	3	Y
3	10p2521	MR.KOLLI RAYANNA GURABASAPPA	8	5	13	100	52	1	
4	10p2529	MR.NIPPANI PRAVIN GANGADHAR	07	1	7	50	14	0	
5	10P2537	MR.PUJARI NAGESH DHARMU	6	12	18	100	72	2	Y
6	11p1902	MR.ANKALAGI ADITYA BASAVESHWAR	11	6	17	100	68	2	Y
7	11p1905	MR.BIRADAR VIJAY RAMAGONDA	10	8	18	100	72	3	Y
8	11P1907	MR.DHODMANI RAKESH MAHADEV	09	4	9	50	18	0	
9	11p1908	MR.DODAMANI SUNIL SRIMANTH	2	10	0	0	0	0	
10	11p1909	MR.GUNGE DEEPAK MOHAN	05	11	16	100	64	2	Y
11	11p1910	MISS.HINGNIKAR YASMEEN MAHIBUB	10	11	21	100	84	3	Y
					SUM			17	
					AVERAGE GRADING			1.54	

Grading:

Less than 50% ====0, 50%-60%====1, 60-70====2, 70 and above ====3

How to correlate CLO with IA Theory and Practical's

CLO	IA 1	IA2	IA3	PA1	PA2	PA3
CLO1	Q5,	Q1				
CLO2	Q1, Q2, Q4	Q2		√		
CLO3	Q3	Q3,Q4			√	
CLO4		Q5	Q1, Q2			
CLO5			Q3, Q4,Q5			√

First Sessional Question paper

1. Explain method of isolation, and estimation of Quinine from cinchona bark
2. Explain method of isolation, identification and estimation of Glycyrrhizin
3. Write note on Asava and Arishta
4. Explain method of isolation, identification and estimation of Andrographolide
5. Write note on herbal drug industry.

First Sessional Practical paper

Q 1 Isolate caffeine form the given tea powder

	Maximum Marks		30	30	30	30			
		THEORY	CLO1-CLO5				Percentage	Grading based on scale of 3	TARGET GREATER THAN 60%
	REG NO	NAME	IA1	IA2	IA3	AVERAGE			
1	10p2512	MR.GHUTUGADE APPASO MAHADEV				29	96.7	3	Y
2	10p2515	MR.JAVALAGI BASAVARAJMALLIKARJUN				28	93.3	3	Y
3	10p2521	MR.KOLLI RAYANNA GURABASAPPA				29	96.7	3	Y
4	10p2529	MR.NIPPANI PRAVIN GANGADHAR				29	96.7	3	Y
5	10P2537	MR.PUJARI NAGESH DHARMU					0.0	0	
6	11p1902	MR.ANKALAGI ADITYA BASAVESHWAR				27	90.0	3	Y
7	11p1905	MR.BIRADAR VIJAY RAMAGONDA				27	90.0	3	Y
8	11P1907	MR.DHODMANI RAKESH MAHADEV				29	96.7	3	Y
9	11p1908	MR.DODAMANI SUNIL SRIMANTH				29	96.7	3	Y
10	11p1909	MR.GUNGE DEEPAK MOHAN				28	93.3	3	Y
11	11p1910	MISS.HINGNIKAR YASMEEN MAHIBUB				29	96.7	3	Y
						SUM		30	
						AVERAGE GRADING		2.72	

Grading:

Less than 50% ====0, 50%-60%====1, 60-70=====2, 70 and above ====3

	Maximum Marks		30	30	30	30			
		PRACTICAL	CLO1-CLO5				Percentage	Grading based on scale of 3	TARGET GREATER THAN 60%
	REG NO	NAME	IA1	IA2	IA3	AVERAGE			
1	10p2512	MR.GHUTUGADE APPASO MAHADEV				29	96.7	3	Y
2	10p2515	MR.JAVALAGI BASAVARAJMALLIKARJUN				28	93.3	3	Y
3	10p2521	MR.KOLLI RAYANNA GURABASAPPA				29	96.7	3	Y
4	10p2529	MR.NIPPANI PRAVIN GANGADHAR				29	96.7	3	Y
5	10P2537	MR.PUJARI NAGESH DHARMU					0.0	0	
6	11p1902	MR.ANKALAGI ADITYA BASAVESHWAR				28	93.3	3	Y
7	11p1905	MR.BIRADAR VIJAY RAMAGONDA				28	93.3	3	Y
8	11P1907	MR.DHODMANI RAKESH MAHADEV				29	96.7	3	Y
9	11p1908	MR.DODAMANI SUNIL SRIMANTH				29	96.7	3	Y
10	11p1909	MR.GUNGE DEEPAK MOHAN				28	93.3	3	Y
11	11p1910	MISS.HINGNIKAR YASMEEN MAHIBUB				29	96.7	3	Y
						SUM		30	
						AVERAGE GRADING		2.72	

Grading:

Less than 50% ==0, 50%-60%==1, 60-70==2, 70 and above ==3

How to correlate CLO with University (Theory)

	Maximum Marks		70			
			CLO1-CLO5	Percentage	Grading based on scale of 3	TARGET GREATER THAN 20%
	REG NO	NAME	Annual			
1	10p2512	MR.GHUTUGADE APPASO MAHADEV	15	21.4	1	Y
2	10p2515	MR.JAVALAGI BASAVARAJMALLIKARJUN	16	22.9	1	Y
3	10p2521	MR.KOLLI RAYANNA GURABASAPPA	8	11.4	0	
4	10p2529	MR.NIPPANI PRAVIN GANGADHAR	3	2.1	0	
5	10P2537	MR.PUJARI NAGESH DHARMU		0.0	0	
6	11p1902	MR.ANKALAGI ADITYA BASAVESHWAR	16	22.9	1	Y
7	11p1905	MR.BIRADAR VIJAY RAMAGONDA	23	32.9	2	Y
8	11P1907	MR.DHODMANI RAKESH MAHADEV	30	21.4	1	Y
9	11p1908	MR.DODAMANI SUNIL SRIMANTH	38	0.0	0	
10	11p1909	MR.GUNGE DEEPAK MOHAN	9	12.9	0	
11	11p1910	MISS.HINGNIKAR YASMEEN MAHIBUB	37	52.9	3	Y
				SUM	9	
				AVERAGE GRADING	0.81	

Grading:

Less than 20% ====0, 20%-30%====1, 30-40====2, 40 and above ====3

How to correlate CLO with University (Practical)

	Maximum Marks		70			
			CLO1-CLO5	Percentage	Grading based on scale of 3	TARGET GREATER THAN 50%
	REG NO	NAME	Annual			
1	10p2512	MR.GHUTUGADE APPASO MAHADEV	36	51.4	3	Y
2	10p2515	MR.JAVALAGI BASAVARAJMALLIKARJUN	43	61.4	3	Y
3	10p2521	MR.KOLLI RAYANNA GURABASAPPA	34	48.6	3	
4	10p2529	MR.NIPPANI PRAVIN GANGADHAR	45	64.3	3	
5	10P2537	MR.PUJARI NAGESH DHARMU		0.0	0	
6	11p1902	MR.ANKALAGI ADITYA BASAVESHWAR	32	45.7	2	Y
7	11p1905	MR.BIRADAR VIJAY RAMAGONDA	41	58.6	3	Y
8	11P1907	MR.DHODMANI RAKESH MAHADEV	32	45.7	2	Y
9	11p1908	MR.DODAMANI SUNIL SRIMANTH	47	67.1	3	
10	11p1909	MR.GUNGE DEEPAK MOHAN	34	48.6	2	
11	11p1910	MISS.HINGNIKAR YASMEEN MAHIBUB	42	60.0	3	Y
				SUM	27	
				AVERAGE GRADING	2.45	

Grading:

Less than 30% ====0, 30%-40%====1, 40-50%====2, 50 and above ====3

Correlated

Correlated CLO with **IA Theory and Practical's**

Correlated CLO with **University (Theory and Practical's)**

CLO with Questions in Class test, quiz and Practical's	1.54
CLO with IA Theory	2.72
CLO with IA Practical's	2.72
CLO with University Theory	0.81
CLO with University Theory	2.45
AVERAGE	2.04

HENCE CLOs HAVE ACHIEVED



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2.6.2

The process of attainment of COs, POs and PSOs starts from writing appropriate COs for each course in the degree program. The course outcomes are written by the respective faculty member using action verbs of learning levels as suggested by Bloom Taxonomy. Then, a correlation is established between COs and POs and COs and PSOs on the scale of 0 to 3, 0 being no correlation, 1 being the low correlation, 2 being medium correlation and 3 being high correlation.

Matrix of Cos-POs and Cos-PSOs for each courses run by the institution are mapped and finally merged to form a program level CO-PO Matrix and CO-PSO Matrix.

Institute which is a university affiliated college, the CO assessment tools used to measure the attainment levels through: Class Test, Internal Assessment [IA], Quiz, Assignments, University exams, performance during experiments etc. These are direct assessment tools. Course Exit survey is also conducted at the end of the every academic year.

Institute conducts three IA for each course. All COs are evaluated using these three IA each of 30 marks. Similarly each student is evaluated for given assignments in the form of class test, written assignment, demonstrations and presentations based on COs during the academic study and finally course exit survey is conducted at the end of every academic year to assess the attainment of COs.

The desirable data collected and filled in CO assessment matrix sheet at the end of the academic year, whereas the data from the annual exam is fed as soon as university results are declared and attainment is then calculated. The attainment of the data is categorically presented as per the guidelines framed by the institute as follows;

Target Level for Attainment:

For CIE and IA for both theory and practical the attainment of COs is computed for the set target of 60% of the total score. The percentage of students attaining this target level of each CO is computed and the average of these percentages is considered for deciding the attainment level.

Similarly The annual exam conducted by university is not based on COs, after the declaration of the university results, the attainment of COs is computed. The target attainment level for each CO for each student is set at 28% of the university exam score. The percentage of students attaining this target level of each CO is computed and the average of these percentages is considered for deciding the attainment level of course outcome.

The average grading for the Class Test, Internal Assessment [IA], Quiz, Assignments, University exams, performance during experiments is computed to assess attainment.